ADULT-CHILD INTERACTIONS IN THREE COMMUNITIES: IMPLICATIONS FOR CHILDREN'S GROWTH, COGNITIVE AND SOCIAL DEVELOPMENT

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CERTIFICATE

This is to certify that the thesis entitled "Adult-child interactions in three communities: Implications for children's growth, cognitive and social development" submitted for the degree of Doctor of Philosophy in Home Science (Child Development) of the University of Delhi is a faithful record of bonafide research work carried out by Rita Bagai under my guidance and supervision. No part of the thesis has been submitted for any other degree. All the assistance received during the course of the investigation has been fully acknowledged by her.

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भो: पूज्या गुरुचरणा: मदविद्याविभेत्तार: सन्तु वो वन्दनानि मम
युष्मत्प्रसादेन मम सन्देहा: भ्रमाश्च ध्वस्ता:

(O revered teacher! The dispeller of my avidya, my salutations unto thee! Through thy grace all my doubts and delusions have vanished).

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ABSTRACT

Experiences and opportunities in early childhood have a profound effect on a child's subsequent development. The nature of child care and interactions within the family have a key role to play in directing the course of development of a young child. Significance of the social and cultural milieu of which family is a part has been emphasized in recent cross-cultural research.

Interpersonal relationships in the familial setting with an emphasis on mother/caregiver-child interactions have been the focus of the present study. It is an indepth study of three diverse groups in North India. The three groups selected for the study were i) construction labourers - migrants from U.P. in an urban squatter settlement, ii) Gujjars-tribals in the mountainous region in U.P. (Hardwar) engaged in cattle rearing, and iii) Garhwalis - migrants from Garhwal (U.P.) in semi-permanent or permanent government jobs in Delhi.

Using the socio-anthropological approach of understanding family dynamics, the three groups were seen as a part of their specific social and cultural milieu. Intensive and indepth study of fifteen families in each group, making a

total of forty five families was undertaken. Families with children in the age group of 1-7 years were selected for the purpose of the study. The sample comprised a total of eighty eight children including forty two boys and forty six girls. There were twenty five children of urban squatter settlement, thirty five of Gujjars and twenty eight of Garhwali group. The main objective of the present research was to study the practices related to family living and child care with particular focus on nutrition and health care, provision of play materials and activities, the mother/caregiver's responsivity to the child's physical and emotional needs and the nature of verbal interaction and stimulation.

Data included case studies of each family using naturalistic observations and unstructured interviews. The physical development of children was assessed by taking their weight for age. Social maturity and adaptive behaviour of 1-3 year old children were assessed on the Vineland Social Maturity Scale (Indian adaptation). For children in the age group of 4-7 years, adaptive development was assessed by using the Stanford Binet Intelligence Scale (Hindi adaptation).

Analysis of the data was done both qualitatively and quantitatively. Qualitative analysis focussed on the economic

and occupational background, the cultural practices and rituals and early childhood care for each of the three sub-groups. The quantitative analysis of the data was done primarily of the relationship between various aspects of childcare, mother/caregiver-child interaction and development in children in the age range of 1-7 years. Nutritional status of children was assessed by using the Gomez' classification of degree of malnutrition related to weight for age. Mean Social Quotient (S.Q.) and Intelligence Quotient (I.Q.)were calculated to see the relationship between maternal interactions and social maturity or adaptive development . A non parametric statistical test (Chi Square) was used to see the differences among the three ethnic groups with respect to the relative frequency of occurrence of a given characteristic and aspects of child care. Contingency Coefficient (C) was calculated to assess the degree of association between the concerned ethnic group and dimensions of child-care.

Results indicated that adequate nutritional care and proper feeding practices facilitate normal development as indicated by weight for age for children. Low body weight of children could be attributed to a large extent to unsupervised and infrequent meals and to some extent to ignorance about the

proper feeding practices. For children in the age range of 1-3 years, nutritional status was positively related to their social maturity, but for older children i.e. 4-7 years, factors like a stimulating environment and learning opportunities contribute to the performance on intelligence tests. A positive relationship between provision of play materials and activities and the child's measured social maturity and intelligence was found. Verbal interaction between the mother/caregiver-child was positively related to the I.Q. of children above the age of three years; for children below three years, a positive relationship between the caregiver's social and emotional responsivity and children's S.Q. was more prominent.

Comparison of the three groups indicated that poor nutritional intake among the children of the urban squatter settlement was responsible for the incidence of higher degrees of malnutrition than in the other two groups. In all the three groups, social maturity of 1-3 year old children was related to nutritional status. Provision of play materials and activities, verbal interaction and stimulation by the caregiver were positively related to performance on tests in all the three ethnic groups.

Mean S.Q. of children in the age group 1-3 years did not vary greatly in the three groups. Garhwali children in the city in the age group of 4-7 years scored higher I.Q. on the Stanford Binet Intelligence Scale (Hindi Adaptation) than the 4-7 years old children in the other two groups. Children in the urban squatter settlement and the Gujjar settlement had approximately comparable levels of performance on the intelligence scale.

CHAPTER - I

INTRODUCTION

Developmental psychologists have been mainly interested in studying the antecedent-consequent relationships between behavioural phenomena and experiential events. This branch of psychology rests on the thesis that experiences in the early years of life have profound and far reaching effects on the development of socioemotional, cognitive and language competence. "The major goal of developmental psychology is to generate the knowledge that will enable man to structure early experience so as to maximize the likelihood of optimal development for each child. Of course, optimal development presupposes a value system, and the value systems vary. Nonetheless, it is the responsibility of the developmental psychologist to unravel the laws of the complicated process of human development" (White, 1971,p.3). Thus the study of the processes involved in human development has practical applications for serving human needs.

Theoretical background and empirical support

There is a strong theoretical basis and a great deal of empirical evidence to support the finding that early

childhood is the critical period for the development of motivation, intelligence, language and socio-emotional maturity. The contemporary study of human development has been guided by major psychological theories about childhood. Since the beginning of the present century, theorists from diverse conceptual orientations have stressed the importance of the quality of early social experiences and inter-personal interactions in shaping the personality of the growing child.

For several years, psychoanalytic and behavioural theory influenced the thinking about early childhood experience and the socialization of children. In recent years, other persepectives on this issue have gained acceptance. A major break from earlier theories came with the application of cognitive theories in understanding children. The significance of the role of biological and neuromuscular development has also been recognized. Contributions from the fields of sociology and cultural anthropology have been of immense value in understanding human development.

The psychoanalytic theory stresses the biological forces that determine human development, one of which is instinct. Freud believed that the human infant is born with a collection of unconscious, instinctive drives that supply energy and

direction for behaviour. The way instinctual energy is channelized and organized determines the developmental changes that occur in an individual. Instinctual energy is not static, but dynamic. This view-point also asserts that certain personality traits of adults and the basic capacity for forming and maintaining good emotional and social relationships throughout life are rooted in an individual's early interactions within the family. The first five years of the child's life were considered by Freud as 'critical' in an individual's personality development. The parent-child relationships especially in the early formative years and the child rearing practices adopted by them have been stressed. The aspects of feeding, weaning and toilet training have subsequently come to be known as the 'Freudian variables'.

The significant influence culture exerts on the timing and dynamics of each stage of development has been emphasized by Erikson in his theory of psycho-social development. Erikson extended Freud's thinking by shifting his emphasis from the primary role of the instinctual nature of the young child within the family to the larger social setting in shaping the child's personality. In Erikson's view, the child evolves via a series of biological, social and psychological experiences which are described as phases in which one central feature is

supreme. The individual is faced with a major crisis in each of the eight psycho-social stages and this must be successfully resolved if healthy development is to occur. Accordingly, the interaction that takes place between an individual and society during each developmental stage can change the course of personality either in a positive or negative direction.

Erikson viewed development of personality as continuous process having cumulative effect. He saw an inseparable connection of each stage to its preceeding and succeeding stage thereby suggesting that the foundation of all the individual´s later development rests as the outcome of the early stages. This epigenetic principle can be illustrated in the development of attachment in an infant. When the infant´s needs are met by his caregivers and his interaction with them is pleasant, the infant learns to trust them. The development of trust in his caregivers would be expected to serve as the later foundation for a positive self image and trust in others. An infant with basic trust moves to the subsequent stage for development of autonomy with greater ease and so on. Hence, according to this theory, each part of the personality has a particular time in the life span when it must develop if it is going to develop at all. Should a

capacity not be developed the rest of the development to follow may be unfavourably altered and the individual will be hindered in dealing effectively with reality.

Consistent with Freud's original ideas Kakar (1981) has highlighted the importance of early childhood years with special reference to Indian society: "Infancy is the foundation for all later psychological experience. Moreover,the nature of an individual's first relationship - with his mother-profoundly influences the quality and `dynamics' of social relations throughout his life" (p. 52). He feels that adaptive learning in the early years is mediated almost solely through the mother's 'instrumentality' when she is the primary caregiver as in most cultures. Depriving the infant of the close contact with the mother may create a psycho-social void which may disturb the infant's development severely.

Unlike the psychoanalysts, a number of psychologists have presented an alternative view of development based on principles of learning. This behaviouristic perspective generally denies the existence of well defined stages in development. It emphasizes the gradual, continuous nature of most behavioural changes of childhood.

Earlier Pavlov's experiments in conditioning served as the foundation for a theory of behaviourism. In this theory stimulus-response connections learned through experience with people form the basis of behaviour. Watson demonstrated that the child's behaviour could be shaped in an endless number of ways by parents, siblings, peers, teachers and others. He asserted that all behaviour is learned, that no aspect of it is biologically inherited or prewired. Most psychologists thought Watson's claim to be extreme and felt that both hereditary and environmental factors must be taken into account in explaining the developmental changes in an organism.

The social learning theory by Robert Sears focussed on the direction in which the parent/caregiver steers behaviour. Dyadic interaction is an important unit of social learning. Sears et al (1957) in an extensive study on child rearing used the Freudian variables of feeding, weaning and toilet training to show that the timing and balance of child rearing is as vital to optimal growth as what the child experiences during that period. Thus Sears focussed on the nature and quality of interactions during the critical periods in development.

The major theories of socialization (psychoanalytic, behavioural and social learning) have focussed primarily on the socio-emotional and affective aspects of development. They have attempted to explain the course of development of normal behaviour traits, failing which an individual may show deviant behaviour. The cognitive perspective is concerned with the development of thought and mental processes. Cognitive theorists have emphasized the role of early inter-personal interactions and certain specific experiences which are significant in shaping the cognitive structures and mental functioning of the growing child.

Jean Piaget with a focus on cognitive development, postulated a theory for describing different stages of thinking during childhood. Piaget talked of maturation to explain development and emphasized adaptation and organisation that occurs in any biological system. He saw children as engaged in continual interaction with their environment. They act upon, transform and modify the world in which they live, and in turn they are shaped and altered by the consequences of their own actions. In his view, this dynamic interaction between an individual and his environment is the foundation of cognitive processes and intelligence. Piaget saw development as adaptation both in the physiological and intellectual aspects. The term

adaptation involves two complementary processes: assimilation and accommodation. Assimilation is the process of taking in new information and interpreting it in such a manner that the information is incorporated into already existing ways of thinking about them. Accommodation on the other hand is the process of slightly modifying his existing modes of thought in order to incorporate new features of the environment. Through adaptation the child develops intellectually by using his own competence to organise and structure his experiences which subsequently leads to the formation of cognitive structures which Piaget termed as `Schemas´. Beginning with simple reflexes which they have at birth, children gradually modify their repertoire of behaviour to meet environmental demands. By interacting with their environment during play and other activities, children construct a series of schemas for coping with their world.

Socialization, from the point of view of cognitive development, occurs as the child adapts to the experience of a particular moment and reorganizes past ways of thinking. Piaget postulated that the biological maturation and environmental experiences interact to provide the individual´s state of thought which in turn influences how the child interprets his social world. Children attempt to

attain a balance or equilibrium as they process the incoming social stimulation, play materials and toys and initiating him into an activity which he could further conduct himself is an experience, favouring concept formation. The foundations for the child to build more cognitive structures lies in such experiences. Piaget's theoretical statement is that the child is the architect of his own learning experiences. In dealing with the objects and people around him, the young child learns the properties of the physical world including object permanence and conservation. In his theory, Piaget delineated stages of cognitive development based on approximate ages. Although the sequential order of the stages remains invariant, age by itself is no criterion for the attainment of certain cognitive abilities. The necessary intellectual stimulation, freedom for exploration and first hand experience with the objects and materials is a must for the development of cognitive abilities commensurate with each stage. Piaget believed that the core of intelligence is logical thinking and the intelligence develops from the interplay of several biological and environmental forces. But Piaget differs from those with a psychometric approach to mental functioning i.e. measuring intelligence and arriving at an I.Q. He was mainly concerned with how children think rather than what they think about and

how many facts they know.

There have been a few other schools of thought regarding the significance of early childhood experiences which have caught the attention of many in the field. One of them has been ethology, the study of behaviour of animals in their natural habitat which has established the biological basis of behaviour in the innate, unlearned tendencies. Lorenz' (1957) major work which is cited frequently has been with birds where he noticed the phenomena of `imprinting' i.e. the young duckling or goslings followed the first large moving object in its sight the moment it is hatched out of the egg, this early phase was critical in building attachment between the young one and its mother.

Emerging out of this research is the `critical period' hypothesis which states that there are certain phases in the developmental span of an organism during which both the favourable and unfavourable circumstances can have permanent and irreversible consequences in a positive or negative direction. The organism is most susceptible to outside influences during the critical phase for a particular kind of learning.

The notion of critical periods occupied a central position in Freudian psychoanalytic thought. He viewed infancy and early childhood as most crucial in moulding an individual's personality which he represented in his famous aphorism, "No adult neurosis without an infantile neurosis". He also asserted that it is almost impossible to make up for the deficit in an individual's development at some later period. It is highly debatable whether the quality of mothering during early childhood determines personality traits permanently. However, most experts in the field are in agreement that each child's development is influenced by his or her early experiences. The disagreement may be about the extent of this influence and about its permanent or irreversible nature.

The significance of early social experiences

> "From the insights of various theories and from observation, we know that the critical period of maximum susceptibility is the prenatal one and the neonatal follows as a clear second. The first three years are the next which are most crucial for the development of attachment and for the beginning of language. For biological, psychological and social processes, there is no clear time marker or event marker, but the vast amount of research evidence now available strongly supports the importance of the first six years as providing predictors and patterns for the rest of the developmental span" (Anandalakshmy, 1986, p.79).

Although it may not be possible to point out the specific environmental experiences and their effects on competence and

learning, research has indicated that the frequency and quality of maternal stimulation have a consistent relationship with infant variables (Bell, 1971; Schaffer and Emerson, 1964).

Reviewing the importance of early care and experience, children in institutions are called to our immediate attention. The question that arises is: Is institutional care detrimental to optimal development? It is necessary to review some research studies done in the area. Records of several studies conducted in the past fifty years have indicated that children reared in orphanages, foundling homes or other institutional settings generally did not grow or develop as well as home reared children.

Some of the well known earlier studies have been reported by Ribble (1943), Spitz (1945, 1946) and Goldfarb (1945) on institutional children. They interpreted that the children who spent their early years in institutions showed certain intellectual and personality malfunctions which seem to be permanent. A series of studies conducted by Bowlby (1958) indicated that children separated from their mothers were grossly underweight, small for their age, subject to infection and generally retarded in the acquisition of some

developmental milestones. These studies on institutionally reared children brought to surface the concept of 'maternal deprivation' i.e. when the infant is deprived of the mothering which is essential for healthy growth and development. Talking of maternal deprivation, Bowlby (1958) believed that it is essential for good mental health that the infant and the young child should experience a warm, intimate and continuous relationship with his mother/caregiver in which both find satisfaction and enjoyment. In the later studies, clinical and behaviour scientists have come to recognize that maternal deprivation is a broad collective term used to cover many conditions including insufficient sensory stimulation, the failure to form attachment bonds, the separation from the mother, a rejecting mother, inadequate intellectual stimulation and even malnutrition (Yarrow, Rubenstein and Pederson, 1975). It may not be possible to generalize the effects of such deprivation on children for there are different degrees and types of deprivation.

Dennis in the early 1950's showed that the effects of deprivation caused by inadequate cognitive experience were irreversible. However, the research studies on institutionalized children should be viewed with caution as

many of these earlier studies have been severely criticized on methodological grounds and faulty design. The institutions differ substantially in their objectives, policies and functioning and hence the effect on children's development may also differ. Nonetheless, these studies have provided data regarding physical care and cognitive experience required for optimal development. The unfavourable influence on the development of infants and young children in institutions may be partly attributed to the fact that in a typical institutional setting, a child is cared for by several people who may work in shifts and may even change jobs and go away. This setting does not give to the child much opportunities to form attachments and have close proximity with any of the caregivers during the critical period for forming attachments. It should be remembered that all institutionalized infants do not suffer intellectual, emotional and behavioural retardation. Where there is adequate social and cognitive stimulation these problems are appreciably reduced. Thus, the crucial aspects of the institution environment are the low levels of stimulation for achievement and the lack of individualized care. In some of the later studies it has been demonstrated that physical contact and sensory stimulation serve to improve the sensory

motor functioning of children in institutionalized settings (Rheingold, 1961; Skeels, 1966; White, 1969; Saltz, 1973).

It is essential to clarify that maternal deprivation does not mean the absence of the biological mother per se which would be responsible for adverse effect on the development of the young child but the `mothering´ which includes the warm physical care, social and sensory stimulation and a sense of involvement which the child ought to receive from a mother/substitute caregiver for a secure and happy childhood. It can be questioned whether it is essential for the child to be looked after exclusively by one person to form a strong attachment. The answer is `May be not´. In fact, the loss or separation of a mother may actually be less disastrous for a child who has been looked after by more than one caregiver than for the one who has had exclusive care from the mother alone. Kagan (1979) feels that "absence of any attachment relationship can have serious implications but attachment with more than one caretaker does not affect the child adversely. Mothers in most societies in the world share caretaking with older daughters or others when the child is young. This practice has not produced insecure infants. Of course, the children in such cases continue to have contact with the mother or at least the same caregivers" (p.888).

emotional interaction as well as learning experiences. Institutional studies have clearly demonstrated that there is much more to early childhood care for optimal development than simply focussing on nutrition and health care. Motor development seems to depend on the opportunities provided for locomotion but for socio-emotional and cognitive-language competence, some kind of stimulation and the caregiver's involvement with the young child seems to be important.

Early home environment: quality of interaction and stimulation

Current interest in infant research has been to study the young children in their naturalistic settings. The home is a primary setting in which the child's development takes place. There is much empirical evidence to show that early social and physical environment that the home provides for the child, has a marked impact on his later development. Although the specific environmental experiences which have effects on competence and learning cannot be made into a formula, several studies have indicated that the frequency and quality of maternal stimulation have a consistent relationship with infant variables (Schaffer and Emerson, 1964; Bell 1971; Yarrow et al, 1975). The early interaction with the caregiver and the stimulation received may be a

predictor for overall competence and for the development of social relationships.

The quality of interaction between the caregiver and the young child is one of the most important aspects in understanding the correlates of the child's development. Physical handling that is gentle, firm, affectionate and relatively frequent seems to have a beneficial effect on the child's early cognitive and motor development as well as to attachment and responsiveness to the mother (Dennis and Najarian, 1957; Provence and Lipton, 1962; Yarrow, 1963; Lewis and Goldberg, 1969; Ainsworth et al 1971). Empirical evidence has strongly indicated that children who lack sensory stimuli and affection or those who grow up in a confined environment, suffer impaired growth and development. Their behaviour is inhibited and learning ability is cramped. These impairments become more serious as the child grows older. By contrast, children who are given proper stimulation from birth show better development of the nervous system, greater powers of perception and interaction with their environment, as well as a more balanced physical, emotional and intellectual growth (Naranjo, 1981).

One of the direct sources of stimulation is the caregiver

which in most cases is the mother. Besides being a source of stimulation, she is also a mediator of stimulation from the environment. The amount, type and timing of the social stimulation by the mother and others in a child's home are important determinants of his later development (Clarke Stewart, 1973; Lewis 1976; Parks 1978). In addition to the interpersonal relations in the human environment comprising the mother and other caregivers, the interactions in the physical environment i.e. provision of play objects and other manipulative materials as well as physical and cognitive activities contribute significantly to the intellectual development of the child. This was demonstrated by Carew's (1976) study of 38 children in the age range of one to three years. She found that children who were developing well had mothers who played the role of a model, observer, facilitator, restrictor, participator, teacher, entertainer, playmate and converser.

It is suggested that many of the clinical symptoms of problem behaviour or maladjustment in children could have its roots in sensory and cognitive deprivation during infancy. Indications of maladjustments also come from the experimental studies by Harlow (1958, 1961, 1962,1966) on the rearing of rhesus monkeys. The infant monkeys were deprived of

interaction with their mothers and other fellow monkeys in the first two years of life. As a result of this they became frightened, interacted less with others, showed sexual maladjustment and were unable to defend themselves from other monkeys. The effects were slightly less severe in cases where the infants were isolated for lesser periods and those isolated for only three months did not show any permanent social deficit. When tested for intellectual development the *isolated monkeys showed no intellectual deterioration* (Harlow, Dodsworth & Harlow, 1965; Harlow, Schiltz and Harlow 1969). Initially the effects of social and sensory deprivation were thought to be irreversible, but subsequently it was found that the effects of isolation were reversible under certain conditions (Suomi and Harlow, 1972 ; Novak and Harlow, 1975). Although it may not be possible to generalise the effects of isolation from infant monkeys to human infants, the studies have stimulated research in identifying specific environmental factors and conditions enhancing optimal development.

Yarrow, Rubenstein and Pederson (1975), in one of their well known studies, have attempted to identify and correlate some specific environmental factors with behaviour outcomes in infants. Based on the observation of forty one five-month-

old infants, they interpreted that visual and auditory stimulation of infants promoted social responsiveness. In contrast kinesthetic stimulation i.e. rocking and carrying the child was related to goal directedness. Further, they found that human stimulation was associated with a child's social responsiveness and language development, whereas inanimate stimulation by toys and other play materials was related to exploratory behaviour. They concluded that research in environmental influences was more complex than has been suggested by researchers emphasizing sensory stimulation or mother's love.

Mother/caregiver's role in creating a stimulating environment for the child has been identified as significant in encouraging exploratory behaviour and building motivation for self learning. Her role as a mediator of stimulation from the physical environment has also been highlighted. Based on an intensive research on mother-child interactions conducted by Harvard University researchers, White (1979) concluded that those who were classed as effective mothers talked a great deal to their children, provided access to many objects and diverse situations. They provided the child with manipulable play materials and encouraged them to use them. They demonstrated and explained things to the child, but mostly on

the child´s initiative rather than their own. They were imaginative and strengthened the child´s intrinsic motivation to learn. This made the child feel secure. Interestingly, these mothers did not spend the bulk of their day with the children. Instead they created environments which helped the children to explore and to have access to a large number of objects and play materials.

In earlier studies too, verbal stimulation from the mother (talking, reading to the child) has been repeatedly found to enhance his language development (Irwin, 1960; Lewis and Goldberg 1969; Gordon, 1969;Kagan, 1971). Visual contact and verbal stimulation during play has been seen to be more promotive of cognitive competence than during caretaking (Yarrow, 1963; Moss et al 1969; Wilson, 1972) whereas the infants´ vocalization seem to increase while exploring novel objects, as a result of auditory stimulation, (Walters and Parke, 1965).

Longitudinal studies in the past two decades have demonstrated a similar link between the quality of stimulation available in the early home environment and cognitive competence (Bayley and Schaffer, 1964; Kagan and Moss, 1962; Bradley and Caldwell, 1975; Bradley and Caldwell, 1976; Yarrow, Pederson

and Janowski 1973). The length of mother-infant interaction at ten months of age was seen to be correlated at the age of six years. Frequent contact with the mother and highly stimulating home environment were associated with accelerated development (Escalona, 1968; Tulkin and Covitz, 1975). Sensitive maternal responsiveness to the infants signals especially when combined with the infants freedom to explore the physical environment facilitates the overall development of competence as measured by a general intelligence test. Supportive evidence was found to the proposition that competent maternal behaviour is related to maternal intelligence (Clarke Stewart, 1973). A linear relationship between maternal and infant behaviour was demonstrated. The single major maternal variable related to the child's competence was found to be verbal stimulation, the central finding was that children's competence was significantly related to maternal care.

Physical proximity between the caregiver and the child has been a salient factor for building attachment between them. This tactile stimulation has shown many other beneficiary effects as demonstrated by Casler (1965). He gave a small extra amount of tactile stimulation to a group of eight institutionalised infants by stroking them for twenty minutes

daily when the infants were between the ages of twenty two and thirty two weeks and found a modest general developmental acceleration. White (1967) performed a series of enrichment studies with four experimental and control groups. Enrichment procedures included extra handling practices designed to increase visual exploration and prehension, appropriate forms and objects in the infant's immediate surroundings etc. The results have been supportive of enhanced developmental measures. The longitudinal analysis of infants by Elardo et al (1975) revealed a positive relationship between home environment and the children's test performance at age three. In their follow up study Bradley and Caldwell (1976) found that the subscales of 'Home' scales (developed by Caldwell)"emotional and verbal responsivity of mother", "provision of appropriate play materials" and "maternal involvement with the child" showed the strongest overall relation to language competence. It is thus seen that children's general cognitive development appears to be associated with a responsive and organised environment in which opportunities are provided for appropriate activities during the first year of life.

Responsive and stimulating caregiving may be important in the early months while play with stimulating toys is more

important later in the first year. This was demonstrated in infant studies by Siegel (1981, 1982). When the infant tests detected a developmental lag at four months, maternal responsiveness and stimulation was a significant factor, but when the developmental delay was detected at twelve months, toys and play materials were significant factors. This was especially true for language expression. It thereby suggests that the most effective environmental intervention differs as a consequence of the child's developmental level. Much learning in the young child comes through his play activities and the play materials available to him. The mother/caregiver not only has to provide the play materials to the infant but also has to be a mediator of stimulation from the environment and to initiate play activities for the child. Children who scored well on the tests of cognitive ability were generally found to have mothers who valued playing with them (Rubenstein, 1967; Yarrow et al, 1972).

Bell (1971) argues that the mother's initiative in introducing her child to stimulating conditions through play has an increasingly important role in the course of cognitive development from the end of first year onwards. He further emphasizes that even when mother is not in direct interaction with the child, she may substantially influence the kind of

experience an infant can have with his environment e.g. providing the child with interesting objects, and giving the child freedom to explore. It seems that if the parents/caregivers help their children to organize their environment and provide play materials appropriate for their developmental stage, the child may move easily or even earlier from sensorimotor to preoperational thinking.

More supportive evidence is derived from further research to suggest that verbal and play stimulation during mother/caregiver infant interaction tend to accelerate the development of cognitive abilities in infants (Carew, 1980; Clarke Stewart, 1973; Elardo, Bradley and Caldwell 1976; Yarrow et al 1975). Some of the observational studies have shown that infants with restrictive exploratory behaviour or those lacking in play experiences and responsive toys tended to lag in developmental competence (Ainsworth and Bell, 1974; Wachs, Uzgiris and Hunt, 1971; Wachs 1979). "The positive relationship between playful caretaker-infant interaction and the rate of cognitive development in the child especially for language can be viewed as reflecting, in part the salutary influence of variety, for the play contains surprises that recruit attention, accommodation and excitement. Variety can be generated in different ways and in different context of

care" Kagan, (1979). The amount of time the mother spent playing with and stimulating the child with materials besides verbal stimulation was significantly correlated with cognitive and language measures. The availability of the play materials per se was not related to high cognitive score but the mothers role as instigator, participant, and mediator of the child's intellectually profitable interactions with the environment (Clarke Stewart, 1973).

These and several other findings have brought out some of the specific experiences the child may undergo with his caregivers-be it mother or any other: grand parents, older siblings or aunts. These findings are also significant in that they demonstrate that some of the specific environmental experiences favourable for optimal development can be provided by a warm, stimulating caregiver other than the biological mother. The substitute caregiving may be within the family setting or through a child care agency.

Quality of physical care: its relation to physical, motor and cognitive growth

An essential aspect of childcare is the care that he receives for nutrition, health and comfort. Investigations of

physical caretaking patterns such as bathing, putting to sleep have not shown consistent or significant relations to infant development (Ainsworth, 1963; Ainsworth and Bell, 1969; Schaffer and Emerson, 1964). The physical fitness of a child and freedom from major infections and deficiency diseases is a reflection of nutritional intake and health care. Though some of the basic motor abilities are to a large extent governed by maturation and may not depend upon socio-cultural factors or child rearing practices, their onset may be affected by the nutrition and general health of the child. Adequate nutrition is a precursor for timely maturation of the neuromuscular mechanisms essential for development of motor abilities. Similarly, it is also known that mental development can also be held back by poor nutrition. Before the age of five or six years, ninety percent of a person's brain cells are formed and physical development is advanced to the point where the pattern is set for the rest of a person's life. These early years, therefore, need protection in order to help the child to develop to its optimum physical and mental potential.

Several studies have been conducted to find the relationship between nutritional status, environmental factors, maternal interaction and cognitive functioning. In one of the recent

studies of 500 infants (6-24 months) across a range of socioeconomic strata in an urban area, it was indicated that mild and moderate malnutrition does not appear to have a direct relation with cognitive development, although motor development is retarded slightly under such conditions. As the infants grow older, the impact of socio-economic class membership increases-a threshold could be postulated below which the risks are high. It was also revealed that infants who were stimulated cognitively by their mothers had higher scores on mental development on a standardized intelligence test. (Anandalakshmy, 1982).

Pronounced adverse effects on cognitive development were seen in children (five to ten years) as a result of malnutrition and deprivation of cognitive stimulation taken together (Singh, Kaur and Dube, 1986).

While a considerable part of motor development has its roots in maturation, the finer aspects of motor manipulatory skills depend upon child rearing practices and environmental experiences. The general health, nutrition and unrestrained physical environment is undoubtedly conducive to accelerated motor development within the maturationally set limits. A study on Nigerian children revealed that the mother's lack of

awareness about infant stimulation and lack of supervision on the part of the health workers were the major contributing factors to delay in walking skill in these children (Ojofeitimi et al 1984). Contemporary Hopi Indians walk earlier than those tested decades ago. This may reflect the enhanced quality of Hopi infant nutrition brought about by food supplement programme (Harriman and Lukusius, 1982). The effect of chronic malnutrition on child behaviour were also examined by determining the relationship between prenatal and post natal caloric supplementation and socio-emotional functioning at school age in chronically malnourished rural Guatemalan children. Results indicated the importance of adequate energy intake in infancy for later socio-emotional development (Barrette, Yarrow and Klein, 1982).

Review of the studies on quality of physical care thereby suggests what has been most appropriately expressed in the following phrase." Attention to physical needs is the most obvious of the mothering functions; however, when this care is given with affection, consistency and joy the infant prospers in all aspects of development" (Anandalakshmy, 1986, p. 79).

Child and the socio-cultural environment

For several decades, developmental psychologists have portrayed the child as a discrete entity, analytically distinct from the external social environment. The limitations of studying human behaviour only in the laboratory has been a concern with many in the field. The classic work of Margaret Mead (1955) and other anthropologists have contributed to the development of an inter-disciplinary approach to study child behaviour. Almost two decades ago, Inkeles (1968) had felt that the researcher's focus was on events in the microsettings e.g. family, and that they were unable or unwilling to examine the impact of social, economic and political systems - "the imperatives of culture" (Cohen, 1971) under which the child lives and performs as an adult. He felt that those studying child rearing are mostly concerned with the personality development and this dominant concern leads them to concentrate on purely intra-familial and interpersonal aspects of parent-child relations. He suggested that the study of child rearing should be broadened to include the interests of society and its influence on the child rearing process.

In the mid 1970's a major shift came within the field emphasizing the role of the environment in development.

Using the multidisciplinary approach in the study of child behaviour and development many experts in the field have expressed their view points. Viewing the child as an integral part of the environment, Furstenberg (1985) asserts, "In making children the exclusive objects of study, developmentalists become captives of conceptual schemes, which are mechanistic and individualistic. Children are described as biological and psychological actors; influenced by but not part of, their surrounding social systems. Children should be viewed as participants in a social system that cannot be understood as merely an aggregation of individuals. The child exists as an inseparable part of the family system that regulates the process of development, partly in response to its collective needs and interests. The family processes are also set and shaped by an external environment over which the family has only limited control. Thus the child cannot be disconnected from the cultural, political and economic institutions that establish the boundaries of the family system" (p. 281).

On similar lines of thought, Super and Harkness (1986) have proposed "the development niche" capturing the important features of both psychology and anthropology. They define "the development niche" as a theoretical framework for

studying cultural regulation of the micro- environment of the child, and for describing the environment from the point of view of the child in order to understand the processes of development and the acquisition of culture. The authors have conceptualised this ´niche´ (the term borrowed from biological ecology referring to an organism functioning in a biosystem) as comprising three components, which are: the physical and social setting in which the child lives, the culturally regulated customs of child rearing and the psychology of the caretakers. The first component has been demonstrated to be related to various aspects of child development.

In an earlier research by the authors in Kokwet, a rural Kipsigis community of Kenya, it was observed that babies slept with their mothers and were not left alone during the day, whereas American babies slept in their own beds often in a separate room or a separate quiet place, during the day as well. The Kokwet babies slept less, overall than the American ones and the American babies slept for longer periods (Super and Harkness, 1982). Similarly, the percent of time an infant spent sitting (in a caregiver´s lap) as opposed to lying down was found to be a factor in the speed at which the universal skill of sitting alone is acquired (Super 1976, 1981). The customs of child rearing can be seen as strategies for dealing

with children of particular ages in the context of particular environmental constraints. The customary way of carrying infants in Kokwet at their backs and tying them with a piece of cloth led to a number of possible positive outcomes including the pattern of visual experience, social interaction, and physical exercise through bodily adjustments to the caretaker´s movements (Super 1981). Given the human and technological resources available, parents and other caretakers adapt the customs of child care to the ecological and cultural settings in which they live . Parents´ beliefs concerning the nature and needs of children, their goals in childrearing and their ambitions about children organise their strategies of child rearing. The authors Super and Harkness feel that" the three components of the developmental niche operate as a system with homeostatic mechanisms that promote consonance among them".

Parallel to the theoretical framework of the development niche, Bronfenbrenner and Crouter (1983) distinguished a series of progressively more sophisticated scientific paradigms for investigating the impact of environment on development. They postulated three models pertaining to the structure of the external systems that affect the family and the manner in which they exert their influence. The proposed

environmental systems are:-

i) mesosystem model which asserts that the processes operating in different settings are not independent of each other e.g. events at home can affect the child´s progress in school and vice versa.

ii) exosystem model which focusses on the environment and settings in which the parents live their lives e.g. parents´ place of work or their social network. The children have limited access to such settings but they indirectly affect their psychological development.

iii) chronosystem is used for designing a research model that examines the influence of the person´s development of changes (and continuities) over time in the environments in which the person is living e.g. normative transitions such as puberty, marriage etc. and non-normative like a death in the family, separation or divorce etc.

In the ecology of human development, families do not exist as separate units but are linked into wider social environments. The work place and broader community settings do not contain the child but are capable of exerting indirect influences on

its development (Bronfenbrenner 1979). During the past decade, studies of the impact of personal and historical life events on family processes and on their developmental outcomes have received greater attention. Recently, Cottrell (1986) has studied families in clearly defined communities in mining and rural towns in Australia, similar in social background but with different work patterns. He demonstrated that factors outside the home exert influences on the child rearing of families with young children. Direct influences were found for work and community features with respect to observable behaviour and practices of mothers than with respect to their attitudes about child rearing, suggesting the existence of environmental dependencies in the relation between outside factors and child rearing practices rather than psychological dependencies. The author feels that the pathways of influence are through the experiences, information and relationships to which parents are connected by their activities and social contacts in various social settings. Accordingly, it may be expected that the psychological environments that parents establish around their children will be related to the concerns and experiences that the parents bring into the home from these other settings via their social network.

Reviewing the ideas of several researchers in cross-cultural and ethnic studies, it is clear that what characterizes culture as unique can be found in large part, in its pattern of social organisation and its arrangement of the physical environment. Hence, it becomes essential to examine these factors in any comparative study of infant caretaker interactions involving different cultures. For instance study of Malay and Chinese families, both rural, showed marked differences in several aspects of infant-caretaker interactions which were mainly due to differences in social organisation and physical environment. In Chinese families, multiple caregivers accounted for a larger percentage of playful bouts of physical contact than was the case of Malay families which were nuclear units (Woodson and Woodson, 1984).

Differences in mother-child interactions were also observed in Japan and in the U.S. American mothers talked more with their 3-4 month old babies and so the American babies talked more, displayed happier vocalizations and engaged in more gross motor activities than the Japanese babies (Caudill, 1971). The extension of the same study done on Japanese families who had migrated to America at the end of 19th Century revealed that the infant interaction resembled the American sample

more than the Japanese sample. This was particularly evident in mothers talking to their infants and the resultant vocalizations of the infant (Caudill and Frost, 1972).

The cultural conditions to which the children are subjected and the experience and opportunities which are provided to them influence their intellectual performance too. Children in an isolated place of Blue Ridge mountains were studied decades ago and it was found that average I.Q's declined from about 84 for 6-8 year olds to 70 at age 8- 10 years and finally to 53 at ages 10-12 years (Sherman and Key, 1932). In isolated groups social contacts are restricted and generally, there may be lack of intellectual stimulation. Similar cumulative deficit in progressive retardation was also observed by Klaus and Gray (1968) in poor children in a small town. This general pattern has been identified in a great variety of settings and among various ethnic groups who are over represented in the low income groups of society (Henderson, 1966). Cognitive growth depends upon the mastery of specific culturally transmitted skills and techniques used in solving the problems encountered in a particular culture. It should therefore, not be surprising to find that individuals reared in a subculture in which certain of these techniques are not highly functional would lack them when

faced with tasks valued in another culture. However, there are certain experiences which are somewhat common across various ethnic groups, but which differ by social and economic status because of the conditions that poverty imposes on the quality of life (Bruner, 1974).

Along with cultural variations, social class differences account for early or delayed onset of certain developmental milestones. As Hess (1970) asserts social class determines a way of life, i.e. infants born into a family with little or no money, experience a world very different from that of those born into a family with a high income. Poverty is the most noticeable aspect of the poor but there are certain other social and psychological experiences as well. Although in every culture the absolute poverty conditions may not be similar, yet it is characterized by some common elements that may be synonymous with it and which are crucial in every culture or subculture (Bruner, 1974).

Regarding the common features of poverty conditions Anandalakshmy (1986, p. 81) has aptly said, "Poverty as a personal experience is real and inescapable and is directly related to the lowering of the vitality of a vast section of the people. The undernutrition of the poor is usually linked

to their lack of purchasing power. The sequels of nutrition deficits are debility, disease and death. The life chances of the poor are so much without hope. When a family does not get adequate nutrition even when all the members spend their resources of time, energy and money on bread winning activities, it knows poverty as a total experience".

Deutch (1973) has talked of social class measures determining the differences in specific life style of individuals in each of these groups. In this he includes nieghbourhood or residence, values placed on education, proportion of income spent on food, housing and entertainment, typical leisure time activities, amount of reading matter, and the like, as well as child rearing practices. He also feels that SES measures are so gross and undifferentiated that they may well obscure more than they reveal. Nonetheless, several studies have supported the view that social class differences do emerge while investigating the specific factors in the environment which may affect the developmental competencies in the young child.

A significant relationship has been demonstrated between maternal teaching strategies and the child's cognitive functioning. Hess and Shipman (1965) have carried out a

longitudinal study of mother-child interactions where they followed a group of 163 Black mother child pairs over a period of four years starting when the children were four years old. The children belonged to four different SES levels from professional and welfare families. They concluded that the mother's teaching style is just as good if not a better predictor of the child's school performance and intellectual functioning than his social class or his mother's I.Q. The teaching strategies are seen to be correlates of social class. The middle SES mothers (in comparison to the lower SES mothers) often gave a rationale with their instructions, used more praise and gave specific feedback to the child.

Significant social class differences have been found in verbal interactions between the mother/caregiver and the young child. In a recent study of Indian infants it was found that there is consistently significant difference in language competence on language items in Bayley's Scales for Infant Development, between the middle and lower socio-economic groups. In the lower socio-economic group, the deficit in children was seen to be in language expression and not in language comprehension (Anandalakshmy, 1985). Middle class mothers are seen to be talking more to their children and to encourage vocalizations in the child. These mothers are also more

responsive to an infant's babblings and vocalizations which act as positive reinforcement for the infant. Variations in mother-child interactions have been found more in studies of mothers with their pre-school children. With this age group, poor mothers have been found to be generally less interactive than middle class mothers. However, the level of interaction with infants under one year of age has appeared to be roughly the same across socio-economic levels, with the exception of the amount of time the mother talks to the baby (Lewis and Wilson, 1972; Ramey, Farran and Campbell 1979; Tulkin and Kagan 1972). Interaction at 6 months was not related to social class or to the child's development i.e. MDI at 18 months or I.Q. on the Stanford Binet at 48 months (Farran and Ramey, 1980). The differences in levels of interaction apparent in the investigations of older children and their mothers from varying socio-economic backgrounds appear to have their origins in the period between six and twenty months, the period when the young child becomes mobile and begins to make different demands on mother. This is further supported by Golden et al (1971) where they found no significant difference in infant's I.Q. when tested between 18 to 24 months, but the same children showed highly significant I.Q. difference at age three. This and several other studies explain the possibility of later manifestations of earlier

processes and experience not being measurable on the infant intelligence scale.

Unfortunately those who are on the lowest rung of the social ladder are highly under privileged in all respects and survive in severe poverty conditions. Poverty has been correlated significantly with cognitive, perceptual and linquistic aspects. Research evidence has demonstrated that disadvantages whether economic, social or ecological adversely affect the cognitive development of the individual (Sinha and Shukla, 1974; Tripathi and Misra, 1975). Several studies collectively have indicated that although the deprived groups do not always perform poorly on the standardized intelligence tests, their performance is poor on a whole variety of cognitive tasks like concept formation, comprehension, vocabulary etc. Bloom´s (1964) carefully planned work strongly suggested that a very high proportion of the variance in adult intellectual achievement, measured by a wide variety of procedures, is already accounted for by the time child reaches the age of five. Many other studies have indicated, that certain possibly critical emotional, linguistic and cognitive patterns associated with social background are already present by age three.

> "Most of the work that compares children from different socio-economic backgrounds points to three interconnected influences associated with poverty. The first relates to the opportunity for, the encouragement and the management of goal seeking and of problem solving; these would affect how he uses language, deploys attention, processes information and so on. The second influence is linguistic - by exposure to many situations children come to use language as an instrument of thought of social control and interaction etc. The third comes from: what parents expect, what teachers demand, what peers anticipate, all these operate to shape the outlook and approach in the young" (Bruner, 1974, p. 151).

Research evidence has also suggested that in early years, the performance of the underprivileged child is not very different from that of the affluent but, the difference goes on getting more and more accentuated as the child advances in age, in favour of the privileged children. The motivation level and competencies in the poor can be traced to the nature of interactions in the early years which may produce what has been described as the "socialization of apathy and under-achievement." (Prabhu, 1986). This is like the cumulative deficit phenomenon or what is termed as the "broom stick" effect. (Sinha, 1982, p. 188).

> " There is a further multiplier factor in the effects we have been discussing: the impact of urbanisation on the care of children. We have until now, argued that poverty, by its production of a sense of powerlessness, alters goal striving and problem solving in those it affects, whether the powerlessness occurs in a depressed London working-class borough, among Kurdistani immigrants to Israel, in a black ghetto, among

> uneducated and abandoned Greenland Eskimo mothers, sown-and-out in literate Copenhangen, or in the midst of Appalachia. The evidence points to a magnification of this effect when poverty moves to the city" (Bruner, 1974 p. 158).

The child in the face of urbanization

Intensive urbanization has resulted from rural migration in large proportions due to innumerable reasons. Areas which have low rainfall and are drought-prone suffer from repeated crop failure. This not only hits the farmer but also the agricultural labourers by depriving them of adequate wage income following the crop failure. Many such farmers with small land holdings and others who may be landless working as hired labour are affected. Under these situations of acute poverty and economic instability, people are forced to leave their village and seek their fortune elsewhere. And so they leave their village, and often have to be separated from their family. They are invariably exploited by unscrupulous employers. They face housing problems and adopt a different life style.

> " The change thus emanating is manifested in a sort of continuum in which different individuals, depending on their propensity to change and the differences in their exposure to change, occupy different positions and cannot be clumped together and described as a unit. It is undeniably a journey towards a breakdown of old values and systems yielding place to new ones, with varying degrees of resistance and concomittant stress

> and strain on the individual, the family and social life" (Majumdar, 1978).

The spontaneous settlements of the urban poor are not merely aggregations of shacks and huts but communities of fellow migrants. Each is based on a network of primary affinities of language, region, village, caste or kin. It enables the rural migrants coming from small village communities to become socialized and acculturated in the complex and diversified environment of a metropolitan city (Majumdar, 1978). The people are not only poor but also displaced. There is little housing, which is precarious and vulnerable. "When migrants reach the city they invariably find themselves pushed into slums or squatter settlements. Rural poverty is carried over to the city by the mechanism of rural urban migration and is most visible in slums and squatter settlements, as environmental deterioration, substandard housing and low levels of health and nutrition" (Desouza, 1978 p.XV). Due to inadequate income, the children are not adequately nourished and fail to gain weight. Their growth is far from optimal. Diarrhoeal disorders, respiratory and other ailments and immunizable diseases continue to depress their capacity and will to live. Many infants do not see life beyond their first birthday. As the health care is almost nil for these children, many of them either die or become

disabled as a result of either disease or malnutrition.

> It is prophesized that at the turn of the century,"at least half of the world's two billion urban people will be living below the poverty line. Of these, the most vulnerable to the ill effects of rapid urbanization will be the children and then, the women. If the present trend of rapid urbanization continues unabated at least 1/3rd of urban children under 15 years in the third world will face conditions of abject poverty. In such situations children born will face greater risks to survival and growth. They grow up in poor, crowded neighbourhoods under marginal and trying conditions. Being the direct victims of their families' search for upward social and economic mobility these children will continue to inherit the insecurity of their elders and live without land or other assets, without water, sanitation or other basic amenities, pushed from place to place racked by emotional stabilities" (UNICEF, 1986).

Most children in such circumstances cannot even dream of attending school, a handful of those do so for a year or two, only to drop out when their help is required at home either to do the household chores or to mother their younger siblings. Unlike his rural counterpart, the urban child often does not have the extended family support to look after him. Thus the vicious cycle of poverty is perpetuated low income - poverty - poor food intake-malnutrition-low stimulation level - difficulty in learning.

The State of the world's Children Report (1988) (1988, p. 1) noted that "one death in every three in the world is the death of a child under the age of five. And each week that

goes by, more than a quarter of a million young children still die, in the developing world, from frequent infection and prolonged undernutrition". The report also highlights the facts which reflect the quality of children's lives, "For the combination of preventable infections and undernutrition, which is the main cause of child deaths, also touches the lives of even larger number of children who live on with ill health and poor growth, unable today to develop to their full mental and physical potential, unable tomorrow to fully contribute to the families they will have or the communities they will live".

India alone has as many or more children than in the whole of Africa put together or more than in Latin America and a large percentage of Indian children live in poverty "of 1,000 children born in India, about 110 die during the first year, 40 more die during the second year, 25 in the third year and 10-15 in the fourth and the fifth year. In other words, almost one-fifth children die before they are five years old. The causes of death too are fairly well known. Almost 1.5 million die of diarrhoeal diseases, 1.5-2 million die a acute respiratory infections and 1.3 million die of diseases preventable by immunization, mainly neonatal tetanus and measles. Malnutrition is the major cause of death, mortality

doubling for each lower category of nutritional status. Malnutrition contributes to infectious diseases and infections in turn increase energy demands and decrease food absorption". (Ghosh, S. 1986 P. 691)

In a recent survey, it was estimated that three fourths of preschool children suffer from malnutrition. Only seventeen percent of children had normal body weight for age (NNMB, 1982). An earlier analysis had indicated that in urban slums the situation was worse with twenty five percent of households meeting neither calorie nor protein requirements, another twenty nine percent meeting protein requirements but not calories, resulting in over fifty four percent of households being inadequate in calorie consumption. High death rates, prevalent malnutrition and frequent illnesses are closely linked to poverty.

The basic nutritional needs of nearly half of the estimated 264 million Indians are not fulfilled and to talk of shelter, clothing, literacy and other amenities becomes a far fetched dream.

Although several studies have shown that a highly stimulating home environment is associated with accelerated development,

it is interesting to note that the term 'stimulation' is used differently in different studies. It is found that lower class homes are noisier and busier, there are significantly more people present, fewer times when the infant is alone, more periods in which noise source is within the room and hence there may be what can be called 'over stimulation' with regard to noise level and activity (Tulkin, 1977; Tulkin and Kagan, 1971; Streissguth and Bee, 1972). An environment which is characterized by over crowding, unhygienic surroundings and sub-human living conditions is true of poverty stricken areas and urban slums. Children from such underprivileged groups are often deprived of the kind of early childhood experience which is favourable for optimal development.

In spite of the dismal picture of urban poverty, DeSouza (1978) found that migrants in the squatter settlements of metropolitan cities were of the view that their standard of living had improved when compared to their situations in the rural areas. In what conditions then they would be living in their villages can well be imagined.

Environmental forces

The network of environmental forces impinging upon a child

operate collectively and normally do not operate in isolation. It is true for all aspects of the child's development, be it physical development, social-emotional or cognitive development. In fact many a time it is practically impossible to identify the precise effect of a single factor. Cravioto et al (1967) have shown in their diagramatical presentation how nutritional defects are linked with economic, cultural and other physiological handicaps:

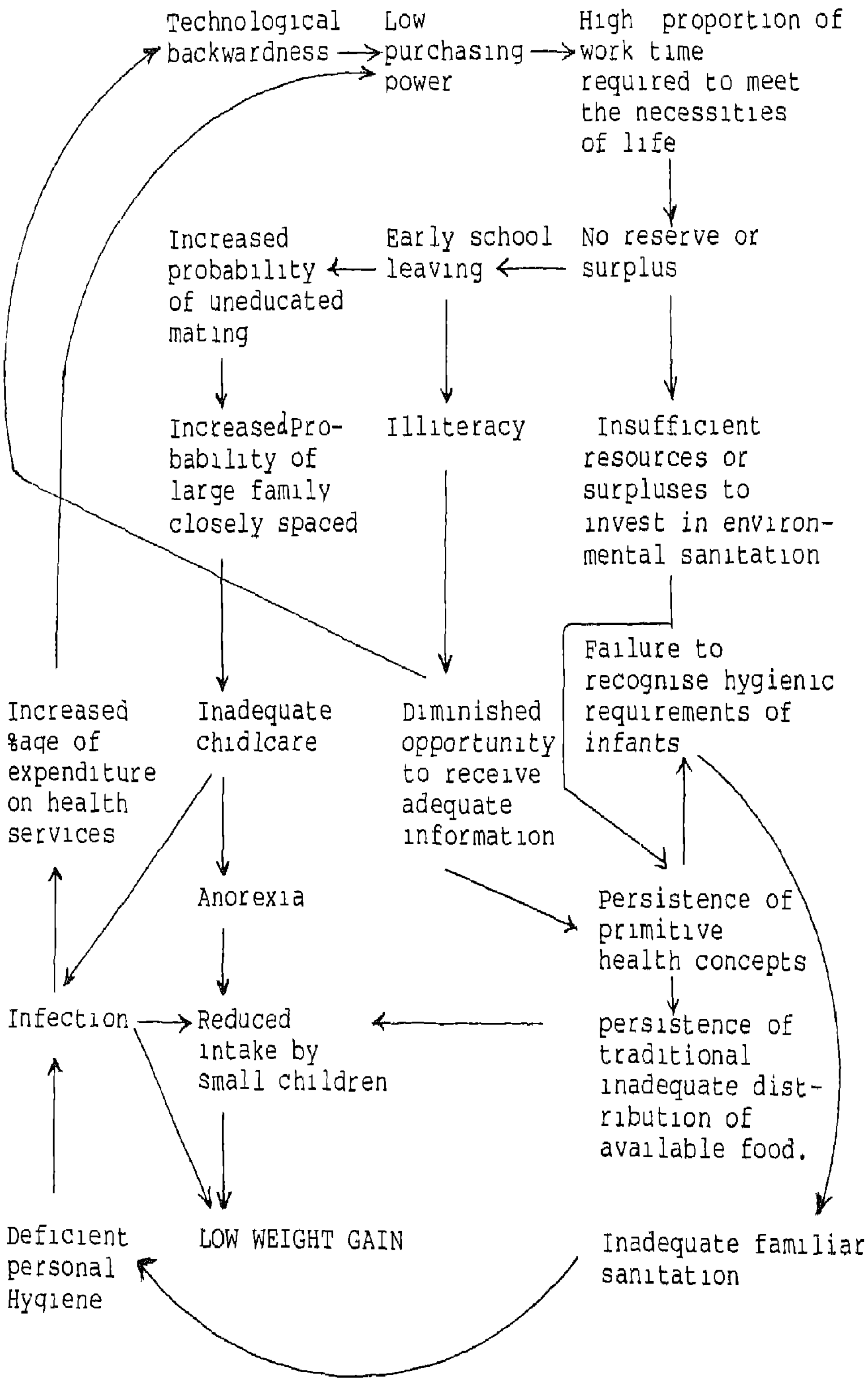

Technological backwardness
Low purchasing power
High proportion of work time required to meet the necessities of life
Increased probability of uneducated mating
Early school leaving
No reserve or surplus
Increased Probability of large family closely spaced
Illiteracy
Insufficient resources or surpluses to invest in environmental sanitation
Failure to recognise hygienic requirements of infants
Increased %age of expenditure on health services
Inadequate chidlcare
Diminished opportunity to receive adequate information
Anorexia
Persistence of primitive health concepts
Infection
Reduced intake by small children
persistence of traditional inadequate distribution of available food.
Deficient personal Hygiene
LOW WEIGHT GAIN
Inadequate familiar sanitation

Chart of interrelations among biosocial factors and low weight gain (by J. Cravioto et al.).

Environment as described by Parke (1978) includes both social and physical variables and assumes that these two sets of variables generally function in an interdependent manner in affecting children's behaviour. He has developed the following model of home environmental influences:

I. Direct Effects Model

A. Direct Social Effects

Adult ⟷ Child
(Mother,
father,
others)

Sibling ⟷ Child
(or Peers)

B. Direct Physical Effects

Toys ⟷ Child

Books ⟷ Child

Noise ⟷ Child

II. Indirect Effects Model

Indirect Social Effects

Adults ⟷ Adults ⟷ Child
Sibling ←A→ Sibling ←B→ Child

Adult ⟷ Sibling ⟷ Child
Sibling ⟷ Adults ⟷ Child

Indirect Physical Effects

Toys ⟷ Noise ⟷ Child

Noise ⟷ Toys ⟷ Child

Indirect Mixed Effects
(Social-physical combinations)

Adults ⟷ toys ⟷ Child

Adults ⟷ toys ⟷ Child

Siblings ⟷ toys ⟷ Child

Toys ⟷ Siblings ⟷ Child

Toys ⟷ Adults ⟷ Child

Direct influence is defined as the process by which a social agent or physical event influences another by directly acting on the child, while indirect influences refers to the process whereby agents or physical events influence another through the mediation of either another person or subject. Both the direct and indirect influences work as a combined force and are interdependent. These influences may be paralleled with what Schoggen and Schoggen (1971) identified as "environmental force unit" which involves interactions in which one individual attempts to influence the action of another. The nature of EFU may vary across socio - economic groups as well as across ethnic groups.

Long term effects of deprivation

Is the lack of certain experiences going to have permanent, irreversible, damaging effect on the child in later years? This is a moot question and there is yet no conclusive answer. Many experts in the field are hopeful of helping children from disadvantaged and deprived environments to make up for the lag in certain developmental processes due to impoverishment. They assert that there is scope for introducing new experiences for the enrichment of the underpriveleged child to compensate for the losses in early childhood. Kagan (1979) feels that

> "even though the behaviour of parents influences young children, often dramatically and the child's profile at one year might predict his or her behaviour 6, 12 or 18 months later. it has been difficult to demonstrate that most of the child's early attributes have an indefinite life. It appears that some problems observed during the first two years continue for 2 or 3 years then gradually vanish due to the presumably therapeutic effect of new experiences. Indeed, Harlow and his colleagues have shown that even the stark consequences of rearing monkeys in isolation can be altered by therapeutic interventions with younger monkeys. It is not that parental behaviour does not influence the young child, but future experiences can be equally effective. Therefore. the profiles sculpted within the family during the first two or three years are not necessarily permanent, although some mav persist if the context that produced them does not change" (p. 890).

On similar lines of thinking, Hunt (1979) has said that to a large extent early losses can be made up if the development-fostering quality of experience improves, and a great deal of early gain can be lost if the quality of experience deteriorates.

Rationale of the present study

The critical period hypothesis has two facets: one that states there are certain periods in development of an organism during which it is most vulnerable to the environmental forces. If there is any unfavourable environmental force operating during embryonic period in prenatal development, the effect could be serious. It may be permanent and irreversible in most cases. The second aspect focuses on

those phases in development during which certain types of learning takes place most easily and with optimal effect. After this phase learning may be possible but effort would be greater and learning may be slower. Nevertheless, the latter aspect gives us hope for certain losses to be made up later in life.

It is indeed heartening to have research indicating reversible effects of deprivation of certain learning experiences. This in turn signifies the possibility of having intervention programmes. The nature of the intervention programmes required for those children deprived of learning experiences which they ought to have had in early childhood must be studied. The level at which they have to be introduced has also to be carefully assessed.

The present research was planned to understand adult-child interactions in certain groups by doing an indepth study of their cultural practices in family living and childcare. The aim was to identify the variables which are relevant for developmental lags or for optimal development.

Many of the studies reviewed on the nature of interactions and stimulation provided by the mother have been conducted mainly

in the Western countries. There is a wide variation regarding the structure of the Indian family, its care giving patterns, the nature of interactions and the number of caretakers within the family. On the Indian subcontinent, there are wide variations in its subcultures. The experience of children in each of these cultures may be distinctly different. The interest of the investigator was to get an insight into the nature of caregiving and interpersonal relationships in the Indian context. The experience of deprivation, poverty and social taboos would have varying effects in different subcultures. The factors accounting for the child´s development may vary in different ecological environments.

Objectives

The present study was aimed at understanding the family dynamics of some of the Indian subcultures. The interest of the investigator was to study the ethnic background and ecological features of the selected groups. The traditions and rituals regarding family life were to be studied so that the interactions and relationships with the family could be seen in the light of this background. The major focus was the relationship of these factors to the development of children.

The second objective was to look into the qualitative aspects of childcare and interactions and to conduct an indepth study of a smaller sample. This research was conducted with the following objectives:

i) To study the cultural background, ecological features and general practices concerned with family living and children.

ii) To understand the relationship between the nature of child care and interactions and the development of the young child.

iii) To study the inter-group differences in the patterns of caretaking and interactions.

Hypotheses

The following hypotheses were formulated for the purpose of this study:-

i) Feeding practices and food intake are related to the physical development of the child.

ii) The provision of play materials and activities is

related to the cognitive functioning of the child.

iii) The quality of stimulation and verbal interaction between the mother/caregiver and the child is related to the child's mental functioning and learning.

iv) Emotional responsivity and expression of overt affection by the mother/caregiver are related to the social and cognitive functioning of the child.

v) There are inter-group differences in the nature of child care and interactions between the caregiver and the child.

CHAPTER II

METHODOLOGY

Research Design

A major aspect of studying different cultural groups is to understand the meaning of folk beliefs and values. To do this, one needs to study the factors which vary from one culture to another. Adult-child interactions not only vary from culture to culture, but also from family to family. In each family, the interpersonal interactions may be geared towards development of certain copetencies or attainment of certain long term goals.

The present research was a cross cultural study of three ethnic groups each having its own characteristics. For the present study a culture- ecological model seemed relevant which perceived adult-child interactions in the context of the cultural norms. The study used a combination of methods to collect the relevant information. Socio-anthropological approach was used for observing the family and interpersonal interactions of its members in their natural setting. The families were seen as part of their specific social and cultural milieu. Members of the groups were informally

interviewed whenever necessary. Assessment of children was done for growth, social maturity and cognitive development by taking their anthropometric measurements and using standardized psychometric tests.

Sample

The sample was drawn from three different socio-cultural groups. They were selected on the basis of ecological differences. Insight into the life style and living conditions of people in each of these subcultures constituted a major objective of the study. The initial idea was to reach the cultural groups which are different from the industrial-technological world. Two of the three selected groups belonged to subcultures which were typically characterized by inadequate living conditions. They lacked the basic amenities of medical care, clean drinking water and sanitation facilities in the vicinity. One objective was to see if there were specific trends regarding the development of physical and cognitive abilities in children despite the variations in the psychosocial and ecological environments. In addition to this, the relationship between child care practices and development in children was to be studied. Initially two ethnic groups i.e. the migrants in a squatter settlement of New Delhi and the tribals of Hardwar were

identified. After the initial visits, preliminary observations and interviews in two groups which constituted the pilot study, the investigator's preliminary findings led to the selection of a third group: migrants from Garhwal in permanent or semi-permanent government jobs in New Delhi. This community was included in order to gauge if certain minimal conditions and amenities which this group was provided with, would affect the development in children substantially. The three groups selected for the study were as follows:-

Group I Construction labourers, migrants from U.P plains in an urban squatter settlement in New Delhi.

Group II Nomads, Gujjars-the tribals in the hills of U.P. (Hardwar).

Group III Migrants from Garhwal hills U.P. in Class III or IV Government jobs living in Government quarters in New Delhi.

In each of the three groups, fifteen families were selected by way of purposive selection i.e. on the basis of availability. The criteria used for selection of families were:-

a) that the family had at least one child in the age range of one to seven years.

b) that the family was intact and had both parents living

The sample comprised 15 families in each group making a total of 45 families. The total number of children in these families was 156 and out of this 88 children in the age range of one to seven years were included in the study.

DESCRIPTION OF THE SAMPLE

Groups	No. of families	No. of children			Children in age range 1-7 yrs.		
		Boys	Girls	Tot.	Boys	Girls	Tot.
I Construction Labourers	15	16	23	39	11	14	25
II Gujjars	15	39	41	80	16	19	35
III Garhwalis	15	21	16	37	15	13	28
Total	45	76	80	156	42	46	88

Techniques and tools for data collections

Many of the studies reviewed were conducted using experimental techniques in laboratory settings. The use of the experimental method in the study of child care practices has

been criticized by the exponents of anthropology, who prefer naturalistic-ecological studies. Several experts in developmental psychology support the latter approach. Bronfenbrenner (1979) stated that "much of developmental psychology as it now exists, is the science of the strange behaviour of children in strange situations with strange adults for the briefest possible periods of time" (p. 19). In his ecological approach to child development, he expanded the method and scope of developmental psychology beyond the individual as the focus of study. He felt that a child's environment cannot be reduced to an isolated subject in a single immediate setting. he argued that "environmental events and conditions outside any immediate setting containing the person can have a profound influence on behaviour and development within that setting" (p. 18). Similarly, Kessen (1983) asserted that child study of the previous decades did not use an adequate model of development and did not provide sufficient tools for arriving at one. He argued that the appropriate object of study is not the child, but the child in context. Use of naturalisitic observations in social interactions and child care practices have been seen decades ago by Barker and Wright (1955) and Barker (1968) in the context of ecological psychology.

In the Indian context Anandalakshmy (1981) and Saraswathi (1986) have pursued research using naturalistic observations emphasising the ecological perspectives and attempted to relate the daily living with goals of child rearing in the family and the larger communities. These arguments and approaches are supportive of Yarrow's (1963) earlier observation that the early environment of the infant has been examined usually in terms of limited variables of maternal care. He felt that many dimensions of the child's early environment are of much greater significance than the standard measures of weaning and toilet training. Keeping in view the emphasis of Bronfenbrenner, Kessen and other eminent researchers on understanding the child's development in his cultural and ecological perspective and as a product of a network of operating forces a naturalistic study using the case study approach was considered appropriate for studying the child in context.

The present study was an intensive research of the dynamics of intra-familial interactions. It was felt that adopting only one strategy of data collection may not be suitable to obtain the desirable information. Since the study involved three diverse ethnic groups, it was thought that a precoded check list or a structured interview schedule would be unsuitable

to get the total information of adult- child interactions. A tool which would have been suitable for one group may not have proved to be equally relevant for the other groups. In an attempt to get the realistic picture of the ongoing interpersonal interactions within an ethnic group, the intensive study of the selected families was undertaken. A case profile of each child in the sample was also prepared. This also enabled the investigator to examine a wide variety of maternal and child variables in the naturalistic setting. The environmental events in the child's life were brought to focus, which could be related to the caregiving patterns and child variables.

Case Studies

The purpose of adopting this method was to understand child bearing and rearing on people in the three selected communities.

The ethnographic description gives the cultural concepts and ideals which are reflected in child rearing and for such information semi- structured interviewing could reveal much of the cultural practices. But to go to the roots of the subjects' background and to study the dynamics of the family, it was necessary to go beyond the ethnographic description.

To understand how individuals experience and react to events, the most effective method was to study them directly by observing their daily life in the natural setting. A case file for each family was maintained which included the description of the actual care-taking operations within a family. The techniques adopted for obtaining information for compiling case studies were as follows: Observation, Interviews and Assessments.

i) Observations

Direct observation was considered most appropriate, as any method other than direct observations may not have been as sensitive to the phenomena under study and may have been misleading. Before commencing the actual observations, an introductory visit was made to each family. The basic information was noted down. This facilitated the process of establishing rapport with the members of the family. In subsequent visits continuous narrative recordings of mother/caregiver and the child's behaviour in different settings at home were taken. Diary records of the events occurring, the child care given and the child's behaviour were kept. Each family in the selected group was visited by the investigator at least five times at different times of the day. Each visit lasted about an hour. During this

period, the events were noted down as they occurred. The information was supplemented with general conversations and unstructured interviews. The ongoing interactions of the child with his caregiver and others, were noted. The child's behaviour was seen with special attention to the play materials used, the type of play, and the other persons at play. The physical set up of each family, the availability of basic amenities and other objects in the house were also noted. In order to make observations more reliable, a few of the families (15%) in each group were observed again after a gap of a few weeks.

ii) Interviews

Interview technique was used with great flexibility for obtaining the desired information. For the pilot study, a structured interview schedule was prepared which included the baseline information about each family and it focussed on several aspects of childcare and mother-child interactions. The basic information about each family was obtained using the schedule but the questions which were found unsuitable in the structured schedule were dropped and those which were found most appropriate were selected. Hence, semi-structured interviews with special focus on child care and interactions within the group were conducted. Ethnographic information

was an important component of the study and this was largely collected through informal interviews using cassette recorders.

iii) Assessment of children

A. Weight of children between the ages of one year and seven years was taken in order to see the relationship between nutritional care and the child's physical development.

The children were also checked for obvious clinical signs of malnutrition.

B. Use of standardized measuring instruments:

i) Vineland Social Maturity Scale (V.S.M.S.) for 1-3 year old children (Nagpur adaptation by Dr. A.J. Malin)

ii) Stanford Binet Intelligence Scale (Hindi adaptation)

The Vineland Social Maturity Scale was used to assess the level of social maturity in children upto thirty six months of age. The scores on this test are expressed as the Social Quotient (S.Q.) which indicates the level of overall

development including intellectual functioning. The test items include the motor, social, cognitive and language skills. The choice of the test was made keeping the following factors in mind. Firstly, it is a standardized Indian version. Secondly, it is on a continuum and therefore children between one year and three years could be scored on the same continuum. Finally, studies have shown consistent and high correlation between the Social Age (S.A.) calculated in V.S.M.S and Mental Age (M.S.) arrived at in Stanford Binet Scale of Intelligence in normal children (Goulet and Barclay, 1963).

For children above thirty six months i.e. three years upto seven years, the Hindi adaptation of the Stanford Binet Scale of intelligence was used to assess their cognitive functioning. The rationale for the selection of this test was two-fold. Being in Hindi, it was found valid for the Hindi speaking population. It had an added advantage of containing both the verbal and performance items. Besides, its scores are reported to have a high correlation with the scores of V.S.M.S. The scores on this test are expressed as the Intelligence Quotient (I.Q.).

These standardized tests were used to get a general picture of

the adaptive development including mental functioning and learning experiences in the selected subjects. Children in the two groups i.e. in the urban squatter settlement and the Gujjar community were non- school-going and therefore not familiar with either the formal testing situations or the materials used. First rapport was established and familiarity between the investigator and children ensured. The test items were administered in their own home.

Besides audio recordings of interviews, photography was used extensively to capture different moments during adult-child interactions. Several photographs of the physical environment and living conditions of the families were taken.

Data processing and analysis

Data were processed and analysed in the framework of the major objectives and hypotheses. The data collected through the narrative recordings of the observations and the informal interviews conducted were given a structured form by formulating the following data sheets:-

1) **Group Data Sheet:** This was prepared in order to record the basic information of each ethnic group to enable the reader to know the basic characteristics of the group at

a glance. It included items such as the type of house, the availability of basic amenities, educational and medical facilities etc. (Annexure I).

The information regarding the ethnographic background of the three groups and the practices related to family living and child care was presented in descriptive categories for each group highlighting the following aspects:

a) General characteristics, background and the ecological variables of the group.

b) Occupation and economic level

c) Family structure and kinship pattern

d) Marriage practices and rituals

e) Pregnancy and child birth

f) General child care practices prevalent in the group

2) **Family Data Sheet:** The basic information about each family was recorded in this proforma (Annexure II). It comprised the following items:

a) Education of parents

b) Occupation of parents

c) State and district of origin

d) Reasons for migrating, if migrant

e) Children in the family

f) Other persons living in the family

g) Type of family

3 **Child Data Sheet:** Information on various aspects of child care was transferred to this for each of the eighty eight children in the group. This proforma constituted different aspects and dimensions of caregiver-child interactions. The interactions were grouped, as per format given as Annexure III, according to the following broad areas:

a) Feeding practices and food intake

b) Play and play materials

c) Emotional responsivity and affective expression of the mother/caregiver

d) Mother/caregiver's verbal responsivity, interaction and stimulation.

Operational definitions and rating criteria

Each of the four aspects comprised 3 or 4 items which collectively indicated the nature of interactions in the related dimension. General qualitative assessment of feeding practices in the three groups was made. Using Gomez´ classification of degrees of malnutrition, nutritional status of children was assessed. Other three areas of interaction were rated on a three point rating scale. A score of 1,2 or 3 was given to each child on each of these items. For the purpose of the present study the operational definitions of the various dimensions and criteria used for rating them are as follows:-

I. Nutritional intake of the child was assessed on the basis of:

a) Number of meals taken: Number of main meals taken by the child during the day keeping in view the age of the child were noted.

b) Quantity of food consumed: The total amount of food eaten by the child during the day was taken into account

c) Supervision during meal times: It was noted whether the mother/caregiver supervised or sat with the child during meal times.

II. **Play and play materials:**

a) Play objects and toys available: The availability of toys and other play objects to the child was noted down.

b) Play materials other than toys: The accessibility of the child to play materials other than the toys was seen and also whether the child used them for playing. Eg. Stones, sticks, grass, old boxes, twigs, etc.

c) Participation of mother/caregiver during playtime: This was rated on the basis of mother/caregiver actually playing with the child. Instances such as mother/caregiver throwing or catching the ball with the child or participating in any such play activity are a few examples of this.

d) Mother/caregiver initiating a play activity: This

was indicated by the mother/caregiver starting the child on a play activity, introducing or teaching a new game or a new form of recreation to the child.

III. Emotional responsivity and affective expression of the mother/caregiver:

a) Degree of sensitivity of the mother/caregiver to the child's physical and emotional needs: This was seen in terms of the mother's/caregiver's concern for the child's feelings and needs and her promptness or alertness in fulfilling them. For instance mother's/caregiver's response in situations like the child crying for food, physical discomfort, injury, sleep, wanting to go to the toilet or to be picked would indicate the degree of responsivity.

b) Frequency of expression of affection: This was assessed from instances of showing direct affection in the form of caressing, kissing, hugging, physical proximity, talking affectionately etc.

c) Mother/caregiver rewarding the child for desirable behaviour. This was rated on the basis of

mother/caregiver praising the child, patting or giving material rewards for displaying desirable and expected behaviour.

IV. **Mother's/caregiver's verbal responsivity, interaction & stimulation:**

a) Mother/caregiver talking to the child: The interactions were rated on the basis of whether conversations took place between the mother/caregiver and the child by way of just talking, informing, asking, singing, telling stories or instances. In the case of infants, the caregiver's conversation with the child was considered for rating.

b) Mother/caregiver labelling objects: This evaluation was based on the verbal interactions where the mother/caregiver introduced or supplied new words to the child for novel objects. Increasing the child's vocabulary and helping him with concepts can be judged by this eg. "Look at this long object, it's called a pencil we write with this", or "Can you see this round thing? It's called a ball.

It is a red ball".

c) Responding to the child's communications and vocalizations: This was indicated by the mother/caregiver responding to the child's attempt to communicate or to an infant's vocalizations by responding to the child. Instances such as babbling back when the child babbles, repeating what the child is saying or answering the queries of the young child are a few examples of this.

d) Mother/caregiver expanding the child's speech: The mother/caregiver's attempt at encouraging the child to speak by repeating new words or sentences, to correct incorrect speech and pronunciations and helping the child to formulate complete sentences were considered for assessment.

CHAPTER III

RESULTS AND DISCUSSION

The present research was aimed primarily to understand the family dynamics of some of the Indian subcultures. Using the socio-anthropological approach, the selected groups were studied for their ethnographic background and ecological features. The relationship of these factors to the developmental status of young children was inferred.

Data analysis was done both qualitatively and quantitatively. The results of the present study are presented in the light of its major objectives which were as follows:

1. To study the ethnographic background, ecological features and general practices concerned with family living and child care.

2. To understand the relationship between the nature of childcare and interactions and the development of the young child.

3. To study the intergroup differences in the pattern of caretaking and interactions.

ECOLOGICAL FEATURES OF THE THREE GROUPS

S.No.	Features	Group I Squatter Settlement	Group II Gujjars	Group III Garhwalis
A.	Location	Urban slum in New Delhi	Mountainous region Hardwar (U.P.)	Government Quarters in New Delhi
B.	Types of houses	Jhuggi	Kucha	Pucca
C.	Availability of basic amenities			
i)	Access to drinking water	Inadequate	Inadequate	Adequate
ii)	Water for bathing & Washing	-do-	-do-	-do-
iii)	Toilet facilities	-do-	-do-	-do-
iv)	Lights/Fans	Not available	Not available	Adequate
v)	Sanitation & hygiene	Inadequate	Inadequate	Adequate
D.	Ecological variables			
i)	Fresh air/trees	Inadequate	Adequate	Adequate
ii)	Open space inside house	-do-	Marginal	-do-
iii)	Space to play around house	-do-	-do-	-do-
E.	Education facilities Availability of school nearby	Within 3Kms	More than 5 Kms.	Within 1 Km
F.	Medical care			
i)	Access to doctor	More than 3 Kms.	More than 5 Kms.	Within 1 Km
ii)	Hospital services	More than 5 Kms	More than 5 Kms.	Within 3 Kms.
iii)	Emergency medical Services	Not available	Not available	Available in the vicinity

DESCRIPTION OF THE THREE ETHNIC GROUPS

S.No. Description	Squatter Settlement M	Squatter Settlement F	Gujjars M	Gujjars F	Garhwalis M	Garhwalis F
I Educational Level						
a. Illiterate	15	12	14	13	9	1
b. Below Primary	-	-	1	2	-	-
c. Upto Primary	-	-	-	-	2	2
d. Upto Middle	-	-	-	-	-	3
e. High School	-	3	-	-	1	2
f. College	-	-	-	-	3	7
II Occupational Level						
a. Permanent Job	-	3	-	-	1	14
b. Daily Wages	12	11	-	-	-	1
c. Own Business	-	-	-	-	-	-
d. Self Employed	-	1	15	15	8	-
e. No Employment	3	1	-	-	6	-
III Type of Family						
a. Nuclear	15	-	11	-	8	-
b. Extended	-	-	4	-	7	-
c. Joint	-	-	-	-	-	-
IV No. of Children						
Mean	3.40	-	5.0	-	2.86	-
S.D.	1.36	-	2.22	-	1.20	-
V Caregivers						
a. Children cared for exclusively by mother	20	-	5	-	21	-
b. Children cared for by mother, siblings and other caregivers	5	-	30	-	7	-

M = Mother F = Father

To attain the first objective qualitative analysis was done and to achieve the other two objectives quantitative analysis was done. Hence, results are presented as follows:

Part I - Ecological settings

Part II - Quantitative analysis

PART I - ECOLOGICAL SETTINGS

Ethnographic background, ecological features and the practices related to family living and child care.

The ethnic groups selected for the study were as follows:-

Group I	Daily wage labourers, Migrants from U.P. Plains in an urban squatter settlement in New Delhi.
Group II	Nomads (Gujjars) tribals in the Hardwar hills of U.P
Group III	Migrants from Garhwal hills of U.P in government jobs (Class III and IV) in New Delhi.

A SQUATTER SETTLEMENT

Construction labourers in an urban squatter settlement

The urban slum which constituted Group-I in the study was located in Behram Nagar, behind Purana Quila in New Delhi on Bhairon Marg at the Mathura Road-Ring Road junction. Facing the slum across the road was the huge complex of Pragati Maidan - the exhibition grounds. The slum comprised approximately 1,000 people. Till about eight years ago, this area had been vacant and the entire land covered with wild bushes and trees. The present inhabitants were migrants who hailed from the interior villages of various states. The majority of this group of construction labourers came from the rural areas in district Hamirpur and Mohuba near Jhansi in U.P. A few came from district Madhubani in Bihar and a handful came from other states like Madhya Pradesh and Rajasthan.

In the caste hierarchy, all the slum dwellers belonged to the lowest rung i.e. they were 'Chamars' (leather workers) by caste. In their native village, they were either landless agricultural labourers or were holding a small plot of farm land which was insufficient for the entire family to live upon. Some may have worked as hired labour and a few others may have been bonded labourers. Most of these rural areas are drought-prone or flood-hit. The possibility of getting

any other job for earning a living was negligible. Hence, in order to improve their life chances and find better opportunities for work, these people had left their native village temporarily and come to large cities in search of work. Since a large majority of them were illiterate and naive and lacked any vocational skill, they could work only as construction labourers on daily wages. However, a few managed to learn masonry skills from others and were able to get work as skilled labourers.

Most families which had migrated had left behind one or two children in the village with their grandparents. Hence, the link with the large joint family was maintained. Very young children and infants who were breastfed accompanied their parents to the city.

The process of migration was not a simple phenomenon. An enterprising or a needy man would venture into this and if he managed to achieve success, it reinforced and motivated other young men to try their luck. The hardships were innumerable.

For the migrants, finding a shelter in a large city is the first task. Living on pavements for a couple of days is a normal feature till they can have a roof over their head i.e.

a thatched clay hut for themselves. A cluster of such shacks constitute an urban squatter settlement. Each hut in the selected squatter settlement measured not more than 80 sq. feet. Its walls were about four feet high made with clay and covered with old rags or thick polythene sheets. A small door was made by joining a few planks of wood. The size of the door was approximately 4x2 feet and the people inside had to crouch. Such squatter settlements are mushrooming in the large cities especially near the large construction sites. These are typically characterized by uniform poverty conditions, overcrowding, poor sanitation and unhygienic living conditions. Being illegal occupants on unauthorized land, these people are frequently victims of demolition of their huts by the municipal corporation. During the course of the study, suddenly one evening, the slum dwellers were caught unawares by the demolition squad. Most of the jhuggis were broken down and the belongings thrown out without any notice to the inhabitants. Despite repeated entreaties they were asked to leave or forcefully sent out. One exception was, however, made for a woman who had delivered a baby less than forty eight hours earlier. The whole night was spent on the roadside by these families but after a couple of days of living in the open, they rebuilt their jhuggis at the same place. A couple of months passed till another demolition

squad came and demolished all the huts and kept a strict vigil in the area. All the migrants were forced to leave and each one went to look for another such settlement. The whole episode reflects the insecurity and instability in their lives. These experiences may be repeated several times and they accept it as they have no option.

Basic amenities

In terms of basic amenities,the area could be simply rated as sub-standard. There was no clean drinking water nearby. There was a nullah flowing behind the rows of huts from where the water was drawn by the residents. This water was used for bathing, washing clothes and utensils. In the summer months one would find a high incidence of scabies and other skin diseases among the residents. A hand pump was installed by contributory effort of the people and this water was used for drinking and cooking. The railway tracks nearby were used as substitute for a toilet where invariably accidents were caused by the moving trains killing several people especially at night. Children defecated anywhere they liked. The narrow lanes were littered with urine, faeces and garbage. There were no schools in the vicinity, nor were there any medical facilities nearby. There were trees all around but the space inside the jhuggis or around the jhuggis

was totally inadequate for children to play.

Occupation and economic level of the inhabitants

Most of the population comprised unskilled daily wage labourers at construction sites. A few had learnt the skill of masonry. These unskilled labourers carried bricks and cement. Their employment was based on the need of the contractor at the site. Often these people especially women would be without work for long stretches of time.

It is not uncommon to see several men and women getting ready for work early in the morning - they would cook food for the entire family, pack up some for themselves and leave the rest for the children who would stay back. These people then left for places where they could hope to get work. For instance, markets selling building materials were potential places where they could be picked up by contractors for work. They sat there and waited till noon. Those who were lucky managed to get hired, whereas others went back home disappointed and disheartened.

According to the reports given by the people in the squatter settlement a skilled mason was able to earn as much as Rs. 50/- to Rs. 60/- per day but the unskilled labourer's wage

was about Rs 12/- per day for a woman and Rs. 20/- per day for a man (27th December, 1985). Contractors who employed them usually took advantage of their ignorance and illiteracy and exploited them. They were either underpaid, or paid very late or there was bungling in record keeping. Many times, they were aware of the unscruplous ways of the contractor but they were helpless as on their own they were not able to find work. On an average they may have been working eighteen to twenty days making about Rs. 400 - 450/- per month and jointly a couple may have made about Rs. 600/- to 700/- per month.

The following instances would reflect their struggles to earn a livelihood. A middle aged couple had come to the city in search of work as they were almost starving in the village. The woman named Champabai had three daughters aged about twelve, eight and six and a son who was barely ten months old. Her aged mother-in-law was also accompanying them. Their entire luggage comprised a tin of wheat flour and a couple of utensils and a cloth bag with some rags. The children were barefoot all the time. The son was in minimal woollen clothing in the month of January, the peak of winter. The infant was just being fed on mother's milk. The woman was also carrying some medicine for him for

congestion in his chest. In the chilly winter, they did not have even a roof over their heads. Sharing a `Jhuggi´ with someone was not possible and in the congested and overcrowded slum, the room for making even a small jhuggi was not available. The hope of getting work had made them wait for a couple of days sitting in the sun and shivering in the cold. The head of the family used to leave early morning in search of work and return in the afternoon after a futile search. The family was living off the money they had borrowed in their village.

After a futile exercise of searching for work, the family moved from this settlement to another area in Delhi, about fifteen kilometres away hoping to strike good luck. Reconciling to their fate and being at the mercy of others, the family may have their hopes materialised or go back to their village in despair. This also could mean that their daughter, for whose marriage they had hoped to make some money, would remain unmarried.

Family structure and Kinship pattern

In the city, the migrants lived in their nuclear units but the ideal family system continued to be the joint or the extended family. Here the families were nuclear out of necessity, but

they continued to fulfill a wide variety of familiar obligations to the larger kin/family grouping. Within the family, rigid hierarchical rules and relationships were observed in which men were considered superior to women and older women and daughters of the family were more priveleged than younger women and daughters-in-law. A woman's status depended upon the status of her husband in his family and whether she had produced a male heir for her husband and the lineage. An older woman had the prerogative to even physically beat up her son's wife if she thought that she had either not obeyed her or been daring to do things against her wishes. One of the women of the slum, Shantibai, felt relieved to be in the city away from her mother-in-law. The husband too had the privilege to beat her or desert her. This she said was largely true for most women in the village. On this account, life in the city was better, although the hardships were innumerable. Many of the couples were obliged to send a large part of their earnings back home to the parents. A few kept back some money to buy clothes or other accessories of their choice which was not possible in the village. As a practice their annual clothing and other accessories were given to them when they visited their native village which was once a year, usually in the summer. Most family celebrations took place during that period.

Marriage practices and rituals

Marriage is treated as an alliance between two families, rather than between two individuals. The marriage is fixed by elders often without consulting the bride or bridegroom. The age difference between the couple was not considered very important in fixing marriages, and in fact the exact ages of the couple may not be known to anyone. Normally they married into their own caste. A girl was sent to her husband's house only when she attained puberty though she was married earlier. The customary practice was that the groom goes to the bride's house with his relatives but there have been instances where the groom has been busy with his school examinations and hence unable to attend his own wedding. Instead the groom's brother took on the task of walking around the fire with his bride by literally putting the groom's towel on his shoulders and completing the ritual of marriage. The bride was given some clothes, silver jewellery and utensils when she went to her husband's house.

Pregnancy and child birth

Pregnancy was considered a natural outcome of marriage. It was not treated as a delicate or vulnerable state where the woman needed extra care. There was no supplementary diet for the expectant mother. Health care and medical care during this

stage was not heard of, be it in the village or in the city. Both factors i.e. the financial limitations and ignorance prevented them from regular health care. In the village, there were no medical facilities in the vicinity.

Often the baby was delivered in a dingy hut, with the help of a woman from the neighbourhood who may or may not have had any previous experience in this. The new born was wiped and the umbilical cord was cut with a blade or any other sharp object which may be old and rusty. In complicated cases, a doctor may be called or the woman would be taken to the government hospital. Ramavati - one of the subjects, in her full term of pregnancy worked till late one night. That night she experienced contractions and pain in her back but carried on with her normal eating, cleaning etc. Around midnight, when her husband and children were asleep, she got up with frequent contractions and pain. Without waking up her husband who was sleeping nearby or calling for any other help, she went to the corner of her jhuggi and squatted on the ground and delivered her baby girl. Then she waited for the after birth to come out. Holding the newborn in hand, she walked upto the corner where she had made a fire place by burning a log of wood. She sat near the fire as it was very chilly in mid-January. She then woke up her husband who called out for

a woman in the adjacent hut. She came and cut the cord with a blade. The baby was wiped and wrapped in an old rag. The baby girl remained unbathed for a couple of weeks and kept wrapped in a cloth rag as the mother did not have clothes for the baby.

Ramavati started breast feeding her baby on the third day when she started secreting milk. Colostrum was not given. Instead, a drop of honey and some jaggery were put in the baby's mouth, as the first feed.

Early childhood: Care and practices

Child rearing practices in the urban squatter settlement provided experiences to young children which were circumstantial rather than out of choice. The migrants in such areas had mainly come to Delhi in search of work and therefore being with their children all the time was not possible. Approximately 40 days after the child was born, the mother stayed away from work. She would, thereafter, carry the baby with her to the work site where she would breastfeed the baby whenever he cried. Infants were mainly breastfed till about 2-2 1/2 years of age or more or until the mother conceived again. Milk other than mother's was not given as they could not afford to buy it and semi- solid foods were not

introduced till the child stopped taking breastfeed. After that the child would be given whatever was cooked for adults and older children. A mother who did not have sufficient milk secretion for some reason would start off the child on `roti´ cooked for the family. Financial limitation and ignorance about the importance of supplementary foods in early infancy prevented them from giving such foods. In fact, the mothers were rather amused when the investigator asked them about the child´s feeding patterns. They thought that an infant was too young to consume anything other than mother´s milk till he was 2 - 2 1/2 years old. As a normal routine food was once cooked in the morning by the woman, which comprised `chapatis´ and `chutney´ made of green chillies and coriander leaves or sometimes chapatis with just plain salt. The parents would carry their share of food with them to work and leave the rest for the children, who stayed back usually by themselves and ate whenever they felt hungry. Occasionally some `dal´ or vegetable was cooked with the evening meal. The fire for cooking was lit twice a day. Besides these two main meals nothing else was cooked. However, there were three families from Bihar who maintained cooking stoves and made tea. For the others, even a cup of tea was a luxury which they could afford only once in a while, at a tea stall in the vicinity.

Toilet training of infants was not a conscious effort on the part of the mother/caregiver. A very young child especially a male child was usually without underwear and the mother cleaned him whenever he defecated, whereas urinating on the cot, ground or someone's lap was common. A toddler soiled the place anywhere on the street or in the jhuggi and if the mother/caregiver was around and noticed it, the child was cleaned otherwise the child would go unnoticed and unwashed. Older children went away to defecate either along with their siblings or their peers. Going in groups was common among the women too.

Bathing was not a daily feature with most of the residents. For the parents there was a time constraint in the morning especially in winters. Women bathed their young ones and themselves on the days they stayed away from work. 'Nullah' water which was used for washing clothes and utensils was used for bathing too. Older children bathed on their own either daily or on alternate days in summers whereas in winter, a bath once a week or in ten days was a common schedule.

Immunization of children against infectious disease was totally absent. No child in the sample was immunized even

partially. Since the children were born in the jhuggis, births were not registered. The colony was unauthorised and so they were not even covered under any health scheme of the government. Children were taken to the doctor or any government hospital in case of emergency only. Inadequate medical care of children could be illustrated by the case of eighteen month old Guriya who had been suffering from severe dehydration. She had been admitted to a government hospital twice where she was kept under observation. Both times, her mother Kamla who was now in her seventh month of pregnancy brought her home without the consent of the doctor. The mother admitted that Guriya improved considerably in the hospital but she could not leave her two elder daughters four and five years old, alone. Guriya had lost her capacity to digest food. Invariably the food given to her was vomitted out. She definitely suffered a developmental lag and was slow in attaining the milestones. She could not sit without support for long and weighed not more than a five- month old.

The questions of sending children to school did not arise although the parents were not averse to the idea of sending them to school. The main argument given by them was their lack of stability and security of living at one place and secondly the non availability of a school in the vicinity.

The nearest school was three kilometres away. Not a single child in the sample had ever gone to school. Recently however, many primary and middle schools had started in their native village but unfortunately the work opportunity there for the parents was limited, so they had to migrate to the city in search of work. Many children who stayed back in the village with the grand-parents were able to attend school and receive education which was almost free of cost.

A large city like Delhi did not offer these children in the squatter settlement any privilege whether it was education, a settled family life or healthy living. Instead, many children remained idle and hung around the streets while the parents were away to work. In such circumstances, the settlement had become the breeding ground for theft, gambling and crime. Children were constantly exposed to men sitting around the street corners and gambling when they had no work. `Ganja´ and `Charas´ were two drugs which had made their way into the slum through drug peddlars. Thus the likelihood of repeating the vicious cycle of illiteracy, unemployment, poverty and crime was undoubted.

Gujjars of Hardwar

The second ethnic group selected for the study were the

GUJJARS IN THE HIMALAYAN FOOTHILLS

Gujjars. They are a tribe living mainly in the hilly areas, at the Himalayan foot hills, with their animals. The tribal population of Gujjars is spread over the entire region around the Ganga and upto Badrinath, Jammu- Kashmir, Pakistan, Afganistan and also along the Nepal border. Living an isolated life, away from the hustle and bustle of city life, the origin of these Gujjars was not easy to identify. Living in a particular region for a few years and then moving away from there with their animals towards green pastures is a way of life with this tribe. By religion, Gujjars are Muslims reported to have been converted to Islam during Aurangzeb's regime.

The Gujjars selected for the present study were inhabitants of the mountainous region around river Ganga in Hardwar. Walking in the hills one would find large hut-like structures with sloping thatched roofs. Their living space was made by flattening the surface around the area. If one walked into the interiors of the forests, one could locate their huts. At a given place, there were just one or two huts which they called `Chappar'. There would be a cluster of such Chappars constituting not more than four or five huts each. Often the inhabitants in these huts would be related to each other. This pattern of establishment suited them as all of them needed

green pastures for their animals. Living in close proximity of each other invariably leads to quarrels over the animals or children. They preferred to live in somewhat isolated clusters. Usually one family had one or two large huts (Chappars) and one shed for their animals. The huts were large about 12'x 20'or more, made of forest wood which was used as pillars for support to the dome shaped hut and thatched roof. These were usually partitioned into cooking and sleeping areas.

Many families made their establishments near the foothills of the mountains in winter and moved up to higher levels in the summer. For any Gujjar to live in a particular zone of the forest, government's permission and a permit had to be sought and this was granted only for that specific zone. It was considered illegal if the family stayed in any other zone. The government charged each family about Rs. 500/- to Rs. 1000/- per year as reported by them. They were also expected to pay Rs. 25/- per animal every six months as the revenue for animal grazing. Since most forests were on contract, bribing the forest officer, ranger, accountant etc. was a common practice. This was usually done subtly in the form of regular supply of milk and ghee to these officers.

No Gujjar was permitted to stay in a forest without the legal permit. If they even tried to enter into the zone of other Gujjars to set up their own establishment, it could lead to a serious quarrel among them. Although these people were living in isolated clusters, they had constituted a local body of elderly men referred to as `panchayat´. For each zone or sub-division one representative was elected whereas a `Pradhan´ or a `Sarpanch´ was elected as the representative of the entire Gujjar Community of this district. Liaison work with the government, keeping cordial relations with the forest officers, and settling legal issues or family problems of the community were among the major assignments of the head. In their local community meetings, many issues which needed to be settled were discussed such as quarrels over the permitted zone of the forest, elopement of a girl, settling bride price or any other matter concerning them.

Link with the town or the city was maintained by the menfolk who went down to the plains almost daily to meet people and buy household items and groceries. It was not an uncommon sight to see Gujjar men trekking up to their establishments or coming down to the plains. often they were seen sitting on the roadside in small groups talking to their fellow men. They were easy to identify because of their colourfully

embroidered long caps or turbans, long shirts and coloured `lungi´ and a long henna coloured beard. Women wore kurta and salwar or churidars and a heavy thick `chaddar´ covering their heads. Women did not go down to the plains for months together. Young children had hardly seen life in the plains. They went to the town with their mothers if unwell and had to be shown to a doctor. The older children went down occasionally with their fathers or they went down to the foothills to deliver milk to the `baniya´ who bought milk from them and then sold it in the market. In recent times, however, one could see many Gujjars including women in the city especially in the markets where they sold dresses or jewellery worn by Gujjars. There were some hawkers selling these articles in the interiors of the forests as well.

Occupation and economic level

The main occupation of the Gujjars was to rear sheep or cattle. The gujjars in the present study were rearing cattle and earning their living by selling milk. The number of cattle per family ranged from 2- 3 to 60-70. Barring very young children, all family members contributed to the family chores. Young children helped by collecting leaves from the forest for the cattle. They also helped in fetching water and firewood. The older ones (both boys and girls), walked long

distances into the interiors and carried bundles of twigs and leaves on their backs. Normally the milking of the cows was done by the woman of the house or the elder sons. Men dealt with the transactions outside. They would often be sitting idle on a cot smoking `hukkas´ or going down to the plains to get to the current local or national news.

The income of each family was proportionate to the number of cattle they owned.

The usual practice was to feed the cattle early in the morning. They were milked around 9.30 - 10.00 am. The buyers or the milkmen would come up to their establishments or, at a specified place near the foot of the mountain at a fixed hour. Milk was then sold to the market by these middlemen. Some milk was given to the forest staff daily and some kept for home consumption and the rest was sold. Butter and ghee were made at home. Groceries were purchased from the market often on credit, as reported by them. It appeared that the credit system between the grocer and the Gujjars was quite a normal pattern of their lives. Their major expense was on food, occasionally on clothes and on household items and on doctors´ bills in case of illness.

Family structure

Most Gujjars lived in their own establishments with their immediate family. These [illegible] wife and children. As a general practice when [illegible] married, a new hut was built for him. [illegible] the larger family but was an independent unit. [illegible] in some cases was done at one hearth [illegible] was done separately. There were however, a few families where under the same roof more than one family was living. In such cases, there were partitions made inside the hut [illegible] walls in between. Some young couples made their [illegible] far away from their parents' establishments. [illegible] decision was dependent upon the availability of water and pasture for the cattle.

Amongst the Gujjars, polygamy [illegible] feature. It was an accepted way of life. [illegible] have two separate households, [illegible] stay in either of the households, whenever he wanted. He would buy provisions for both the households, give them [illegible] according to the size of each family. Both the wives worked towards the economic gain of the family. The two establishments were either adjacent to each other or distant from each other. In this sample, Yusut, who was the elected

leader of his zone had married twice and had two households. One was up in the forest and the other was near the road. He owned about 60-70 cattle and some farmland. Despite hiring three Gujjars to work for him, he found the household work tough to be managed by one woman, and so married a second time. Both women worked cooperatively in managing the housework although they had separate kitchens. Yusuf stayed in whichever `dera´ he liked. The inability of the wife to bear children, the death of a partner or too much work were some of the reasons given for the second or third marriage of men. Noorsen for instance, married Kammo-his brother´s wife, after his brother´s death, as he felt that she might marry someone else leaving her children behind. Therefore, he went through `Nikah´ ceremony with her and made her `dera´ near his previous `Chappar´.

Marriage practices and rituals

Amongst the Gujjars, child marriage was prevalent. Normally, there was a mutual exchange of girls between two families. A girl was married into the family from which a bride for her brother had come. She was permitted to marry into a family not in the patrilineal line i.e. she could marry her father´s sister´s son but not her father´s brother´s son. Usually the bride and the groom were married while quite young but the

girl was sent to the groom's house only after she attained puberty. The age of marriage of the children ranged from one year to fifteen years. The usual pattern of fixing a marriage was by mutual exchange of girls but in several cases, a girl for exchange was not available in the groom's family. In such cases an adolescent girl was exchanged for the groom's two younger sisters or his cousins from paternal or maternal side. In certain cases, where the groom's father was not able to give a girl in exchange, he would have to pay the bride price to the girl's father. The price ranged from Rs. 4000/- to Rs. 35000/-. The man who did not have the means for paying the bride price either took loans or gave his cattle in exchange. In some cases, the groom lived in the bride's parental home for a couple of years and worked for them, ate with them and served them without taking any salary from them. Husna Bano married a man who worked for her parents on a monthly salary. After their marriage, however, he continued to work for them but was not paid any salary. Their basic needs for food, shelter and clothing were however, taken care of by Husna's parents. Husna's parents gave their daughter two heads of cattle as a wedding gift. For a couple of years she and her husband lived with their parents and then they set up on their own with their cattle which had multiplied to four by then.

Elopement was not uncommon amongst Gujjars. If a married woman eloped with another man, the man had to pay the bride price to the girl's husband. Instead of this price the groom could also give a sister in exchange to the bride's family. A man could claim the children if his wife eloped with another man. In one such case Kammo left her husband's house to stay with her father as her husband was having extramarital relations. She took her children including one adolescent daughter with her. Her husband was constantly pestering her to return their daughter to him so that he could marry the woman he loved and give his own daughter in exchange, as he had no money to pay the bride price.

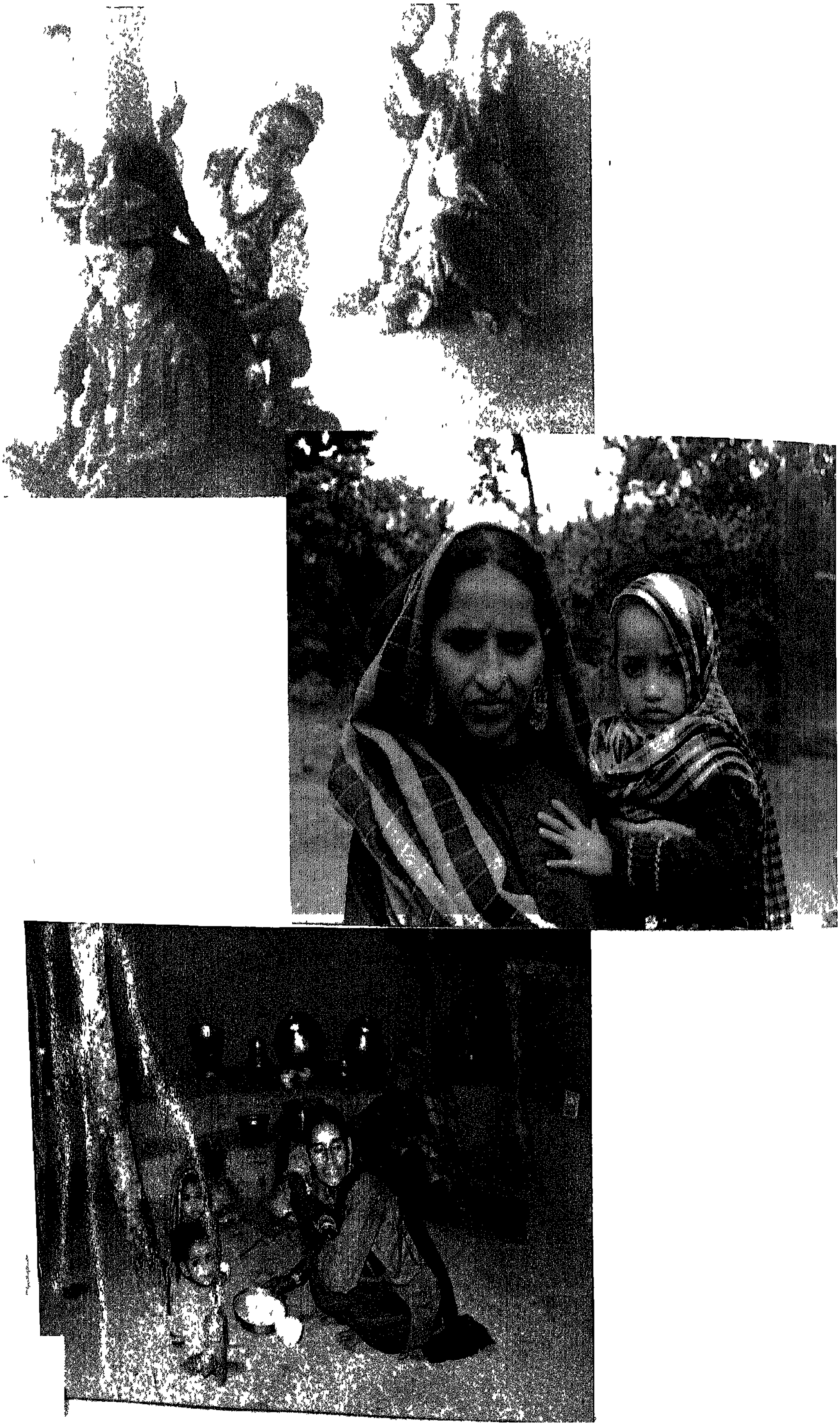
The marriage ceremony usually took place in the bride's house where the groom brought his relatives for the occasion. The number of guests varied from a few to thousand or more depending on the economic status of the bride's family. The guests were served either only rice and ghee or given a full meal. Th guests usually stayed overnight as they came from far off places and avoided walking in the forests at night lest they be attacked by wild animals like elephants and jackals. The bride and the bridegroom took the oath at the marriage ceremony which was conducted by a Muslim priest.

There were also cases of infants getting married, when the babies were held in their parents´ lap and the oath was whispered in their ears. A few clothes and some jewellery made of imitation or pure silver was usually given to the bride. Cattle were given to the bride´s family by most parents either at the time of marriage or later.

Pregnancy and childbirth

Gujjars normally had large families. On an average, a Gujjar woman may' bear five or six children. Birth control was not practised at all by them. A child was welcomed as God´s gift. The expectant mother followed the usual routine of attending to the animals and milking the cattle. There was no special diet for her, neither was physical labour reduced. Pregnancy was considered as a normal state for a woman and not a condition for any extra attention. There was no practice of going to the doctor for any kind of medical check up during pregnancy. The child was delivered in the `chappar´ with the help of a neighbour or mother-in-law of the expectant mother. There was no professional midwife for help. In case there was an emergency due to any complications, the woman was taken to the hospital. In such a case she was unable to walk down the mountains so she was carried on a cot by four men and taken to the hospital in the city. Immediate medical care in

GUJJAR WOMEN AND THEIR CHILDREN



emergency was not possible. There were instances in recent times where the doctor was brought upto their homes in the forest for a high fee.

After the delivery, the mother and child were bathed. She was given `porridge´ or `halwa´ to eat. The baby was breastfed only on the second or third day after birth. Colostrum was discarded. The newborn was given a little honey or buffalo milk in a spoon occasionally till the breast feeding began.

Early childhood: care and practices

The day began early. The men walked to the forest to leave their animals for grazing. At dawn women of the house made tea as the first task in the morning. All the family members including children were given tea served in bowls. There after the family chores began. Each member, barring very young children, got involved in the household work. The hectic activity of the early morning included all the cattle-work feeding and milking the buffaloes, in addition to the household tasks like fetching firewood and water, washing vessels and boiling milk. The women attended to their children only around midmorning after milking the buffaloes. Under the pressure of work in the morning, a child´s crying or hunger needs were sometimes ignored. Usually all the older

children were also busy during the morning hours, but the elder daughters were substitutes for the mother in looking after the infants.

Regarding the feeding practices for young children, babies were breastfed till about 2-2 1/2 years of age or till the mother conceived again. In a few cases the mother continued to breastfeed her baby even if she was pregnant again. Weaning from breastmilk to buffalo milk and tea took place as soon as the infant could sit, and hold a cup in his hand which was around 15-18 months. Supplementary foods like cereals were not given until the age of 2 1/2 to 3 years. The need and importance for such foods in the earlier months was not known to the Gujjars. The first main meal was cooked around mid morning and was given to all children along with freshly boiled milk or lassi. All family members ate sitting around the hearth where the food was being cooked. Meals comprised large chapatis made of wheatflour, bajra or maize served with dal or butter. Except for potatoes, the vegetable consumption was rather low, although in the rainy season many Gujjars grew vegetables around their homes. Young children consumed milk twice a day if not three times. The second meal was cooked late in the evening but tea was made in the afternoon for the family. The pattern of mealtimes was more

or less similar amongst all Gujjars visited in the area. Toilet training of the infants was not a conscious effort on the part of the mother/caregiver. The child went away from the hut to defecate as soon as he was ready for it i.e. around 4-5 years and the mother or elder sister went and washed him there. Bathing in summer could be daily for children in the nearby streams, but in winter children as well as adults bathed only once in a fortnight or probably once a month, as reported by some of the men.

Mothers got time to bathe and clothe their young children only in the afternoon when they spent sometime on themselves or with their children. A common sight was to see Gujjars, especially the menfolk taking a regular afternoon nap.

Immunization against infectious diseases was not done for a single child in the sample. Although one of the women did show some awareness about preventive injections, she also said that Gujjar children did not take injections. In emergency situation medical care was given. They had to travel a great distance to go to a doctor.

Living in the interior of the forests prevented the children attending school in the town. The parents too did not show

any aspiration for their children's education. They felt that it was not safe to send young children through the forest which is inhabited by wild elephants and jackals. They felt that for rearing cattle, schooling was not required. In addition, the children were required to contribute to the animal work. However, there were four boys aged 16, 15, 12 and 11 years who were attending school in the nearby villages. They were old enough to go by their bicycles and they had influential fathers who were elected leaders of their zone and who could afford to hire help to do the cattle work. These boys too started school after the age of 9-10 years as the sixteen year old boy was studying in Class V and so on. Aspirations for literacy were low among the Gujjars but teaching children to read their religious book `Quran' in the Persian language was a desire with many parents. There were about seven boys and eight girls who were learning to read Quran by the rote learning method. A Maulvi who was not a Gujjar was paid about Rs. 15-20/- per month for each child and given food in some cases. He was employed for teaching children for two hours early in the morning and the afternoon. In between the children went to their `chappar' to take meals or help the mother with some household chores like washing vessels or collecting cow dung. Often young girls had an additional task of looking after their younger siblings. Many

times, younger siblings accompanied their elder sisters to these `Quran´ teaching classes. These lessons were given to the children by very few parents depending on the availability of a `maulvi´ to come to their establishments and the financial capacity of the parents. The children were sent to these classes only for a few months. Whether for sons or daughters Gujjar parents did not hold high value for education. In their view, competence in an individual could be measured in terms of how well versed he/she was in rearing cattle and secondly how much physical labour he/she could put in work. Desire to change their traditional work or in the way of living was not expressed by most of the Gujjars.

Despite the lack of basic amenities and the danger of being attacked by wild animals, they seemed quite happy with their life. Their aspirations did not go beyond their life style.

Migrants from Garhwal

The migrants from Garhwal formed the third group in the study. They belonged to the lower middle socio-economic level. The subjects were selected from a government colony in Andrews Ganj, South Delhi. The inhabitants being in government jobs were allotted these houses. The flats were quite centrally located, connecting several residential areas of South Delhi.

A GARHWALI HOUSEHOLD IN DELHI

The small one room tenement included a room and a kitchen, each built on the ground floor and the first floor. The occupants of two flats shared a bathroom and toilet built just adjacent to the rooms.

There was running water in the bathroom, toilet (flush system) and in the kitchen. The water supply was constant except for a few hours during the day. Lights and fans were also provided. The houses on the ground floor had open space in front, whereas those on the first floor enjoyed the terrace and a front balcony.

Many people who had been allotted these houses were not living in them. They had rented them out to others getting rents ranging from Rs. 250/- to Rs. 350/- per month. Some who were living themselves had rented out part of it i.e. the kitchen. In some houses extended families were living together in that one room apartment. Most families were migrants from the hilly areas of Pauri Garhwal, Tehri Garhwal and Kumaon region in Almora, District Nainital. Some families living here had migrated from Bulandshahar, Bareilly, Moradabad etc. In the village their main occupation was farming. There was no electricity in the region they came from. Mostly the older generation i.e. the old men and women stayed back in the

village to do farming and the younger generation had migrated to Delhi for jobs. Many of these men had some education in the village, till primary or middle school; some of them pursued education in Delhi upto high school or even college.

They held jobs as peons, clerks, store keepers etc. In fact, in several cases, if one of the men of a family had migrated to Delhi, he gradually got the other male family members over, for jobs and the younger boys of the families, for education. They found it convenient to send them to school from Delhi as schools were within one km radius. The children could walk to school.

Many women did not migrate on permanent basis but stayed in the village to help at the farm. They came to the city occasionally. Often, women of the same family took turns to be in Delhi. A few came to Delhi on some pretext or the other and did not go back. Some of them had left their sons in Delhi with their fathers for their education. The girls lived in the village or attended school in the city only if their mothers were also staying here. Usually girls would not be left with the fathers in the city for education. In such cases, where part of the family stayed in the village and the rest stayed in the city, the inter-personal relationships did

get affected.

One such instance was that of Kamla, whose husband migrated to the city when he was in middle school. He stayed with his elder brother and sister-in-law and pursued his education till graduation. He then married an illiterate girl (Kamla) from the village. He continued to stay in Delhi where he got a government job, whereas Kamla stayed in the village with her son. When her son was three years old, he was brought to Delhi to be sent to school. By then Kamla had a second son. Her husband visited her only once a year. When the second son was about five years old, he was brought to Delhi by Kamla. The family wanted the second child to stay here too, but Kamla was expected to go back to the village. She was very resentful of this suggestion as she felt that if both her sons and her husband stayed in Delhi, what would be the purpose of her staying alone in the village with her folks who had their own families in the village? She was quite adamant this time and refused to go back to the village. Her sister-in-law who had stayed in the city to cook for this extended family also refused to go back. Kamla definitely resented this and felt that her children were not taken good care of by their aunt in the city.

During the harvest season many men took leave and went to help in cutting the crop as they also had a share in the crop and the family house. Most had family land and 'pucca' houses in the village. But the life at the farm was quite hard-women left the house in the early hours and worked for whole day leaving their young children with their mothers-in-law. There was no water or electricity in the villages. They had to travel a long distance to fetch drinking water. Some women who had stayed in Delhi for a while became reluctant to go back to the village as life in the city offered them luxuries of the city such as electricity, water, pucca house, T.V., fans etc. In addition to the basic comforts of the city, life here was easy as compared to the village life. Women got sufficient time to go out for social visits, gossipping with neighbours and to take their afternoon siesta.

Schools in the city were in the vicinity where most children walked to school themselves and for very young children mothers walked them to school. Education was almost free of cost and there was enough space to play around in the colony. Medical facilities and availability of doctors in emergency were other attractions for these women. Savitri for instance, had been in Delhi for a number of years now and the main reason for her staying here was her elder son who had an

attack of fever in the village when he was one year old and due to lack of proper medical care, had lost his hearing. Now he was thirteen years old and although he could not get his hearing restored, he was attending the school for the deaf. This kind of facility was not available in the village.

Occupation and Economic level

Most of the migrants from Garhwal had initially migrated for higher education. Some came in search of jobs while a few came away to see the city life. Those who could complete at least high school managed to get Class IV government jobs (peons or security men) and many got clerical jobs. A few who migrated without much qualification or ambition took up jobs as domestic servants or motor mechanics. Most men with permanent government jobs were allotted living quarters also. The monthly income of these government servants ranged between Rs. 900/- to Rs. 1500/- per month approximately.

Amongst those women who were living in Delhi, a few were just doing housework whereas most others tried to supplement their family income by working for export houses. They brought work like knitting sweaters from garment manufacturers and did it at home. When the children went to school and these women were free from household chores, they sat with their friends

and knitted. This brought them some extra money for the house. A few of them had made small shops outside their houses selling things like grocery items, daily provisions or vegetables.

Many children of the present generation had been in Delhi for several years and had not been exposed much to farming except when they went to the village during vacations. However, many of the adults had not totally given up farm work. They went to the village during harvesting season and helped in harvesting the crops. Their permanent jobs gave them provision to take leave with pay. But for the present generation, livelihood was dependent more on the jobs they were able to get in the city which was based on what they had achieved academically or qualified technically. The younger generation neither took interest in farming nor were they encouraged to do so as the life at the farm was hard and life in the city gave them a better start if they worked seriously and sincerely.

Family structure

In the city, many families were nuclear units, and a few could be called extended. In such families there could be two brothers with their wives and children or a family staying

with younger brothers or nephews of the couple pursuing their education in Delhi. In some cases two men would be living with their sons together whereas their wives and daughters would be living in the village. The wives came occasionally to the city and stayed here for short stretches. The strong links with the joint family in the village were continually maintained. The customs, rituals and traditions of family were still followed. Most weddings took place in the native village, other important functions like 'mundan' ceremony of boys were also celebrated in the village. The major decisions regarding career were also taken with the consultation of all the elders in the family. This was true of the present generation who had lived in the village at least half their lives. But now the trend appeared to be changing. The growing generation who have not lived in the village in their childhood had no affinity for their native fellows. And since migrants from Garhwal had been here for several years and the number was increasing tremendously-some marriages had now started taking place locally in the city although the number was still low. With this trend, the links with the native village would tend to become loose.

Marriage practices

Marriage alliance was between two families and not seen as

between two individuals only. It was fixed by elders, where the bride and the bridegroom may not have had much say in the matter. The age at marriage of the couple used to be much lower, but recently the ages of both groom and the bride had gone higher. A boy would be around eighteen to twenty years whereas the girl was between fourteen to sixteen years. As the level of education was going higher in the present generation for both boys and girls, it was felt that, the age at marriage may also go up. Although many of the boys had been educated till the high school level or even upto graduation, they often settled down with a totally illiterate woman from the village - any girl of their parent's choice. If the boy got married, while he was still studying, his bride was left in the village with his parents till he finished his education and found a job. In the traditional wedding, there was no dowry which the girl carried with her at the time of her marriage, but recently with a number of them having migrated to Delhi they had picked up the city peoples' way of doing things i.e. they had started giving household furniture such as beds, sofa-sets, cupboard etc. to their daughters as wedding gifts and expected the same when their sons got married.

pregnancy and child birth

Women in the village delivered their babies at home with the help of their mother-in-law or a midwife in the village. The medical facilities in the village were negligible. Complicated cases were, however, taken to the hospitals which were far off. In the city some women delivered in the hospitals or maternity health centres whereas the others delivered at home with the help of the nurse from the dispensary. Although the facility of the health centre was provided to the permanent government employees, many women still preferred to deliver their babies at home. Kamla, whose husband worked in All India Institute of Medical Sciences as a Store keeper ran away from the maternity ward twice at the time of her children's delivery. She hated the sight of the hospital and without telling the attendant came back home and delivered her babies at home, despite the free medical facilities at the hospital. Of course, in several cases women resorted to delivering their babies in the health centres or hospitals because of over crowding in the houses. The baby was breastfed which started on the second or third day. Usually colostrum was discarded.

As regards family planning, many were aware of the methods of birth control. They had either got tubectomy done or had an

CHILDREN IN THE GARHWALI HOUSEHOLD IN DELHI

intra-uterine device fixed. The women seemed to have been more keen to have small families, had undergone tubectomy. But the keenness was definitely apparent after the third or fourth child.

Early childhood: Care and practices

The day in a [illegible] household began quite early perhaps 5 O'Clock. Usually the women got up much earlier than the rest of the members. The morning time was full of hectic activity for the women of the house. Preparing tea, cooking breakfast and lunch to be packed comprised the main tasks. Many men helped in dressing up children for school as well as in chores like washing clothes or storing water for use when the water supply stopped during the day. Children ate their breakfast which comprised bread or 'roti' along with tea or a cup of milk, and carried a 'roti' or 'parantha' in the tiffin for school. Consumption of milk was not a regular practice for older children while younger children were bottle fed till the age of four or five years. Babies were breastfed for almost two years. By the end of first year, many infants were given some bottle milk and supplementary semisolid foods, like bananas, biscuits, bread etc. though this was not a regular practice as the mealtimes were also not clearly scheduled. It seemed that ignorance of the significance of supplementary

feeding for the infant's physical development was the major reason for this. The staple diet of these people was rice along with which they ate mixed pulses. Vegetables were consumed at least once a day. Fruit was considered a luxury consumed occasionally. By the age of 2 1/2 - 3 years, a child was eating the food cooked in the family.

Toilet habits were imparted to the child gradually and without undue anxiety. Many mothers made the young infant pass urine at regular intervals either in their courtyards or by the side of the drain. Often infants remained without underwear so that the mother did not have so much washing to do. Around 2 1/2 - 3 years the child was taken to the toilet and mother or an elder sister washed him. By six years children could wash themselves in the toilet.

Bathing was almost a daily habit for the older children. Those upto five-six years were bathed by the mother. In winter however, bathing once in 3 - 4 days or a week was common for children. Clothes were however washed daily or on alternate days. Hair was oiled and oil message for new born babies was a common practice.

Regarding the medical and health care a dispensary in the

colony took care of the minor and major illness. Most subjects were entitled to avail the services of the dispensary. Government hospitals were also not too far off. Most of the births were on the records of the health centre so the mothers were guided for the immunization of their children. Only those children born in the village and those who frequently visited their village missed on their regular immunization schedule. In the sample, immunization was complete for 85% of the children whereas the rest were partially immunized. Awareness for immunization of children was also created through exposure to T.V. and radio programmes.

Schools in the vicinity enabled most children in the school going age to attend school. All children above the age of four years, with the exception of one four year girl Ameeta attended school. Her mother was planning to send her to school in the coming academic session. She did not give any definite reason for not sending her earlier although her elder sons had starting going to school as early as three years. Many children (64%) in the sample attended the neighbourhood schools and a few went to schools further away . However, three children of Kamla's family went in the school bus about four kilometers away. It was close to their residence when

they lived in that area but now they had shifted from there but they continued to attend the same school. Digambari (7 years) attended Navyug School, a government run school for gifted children. Vinod (7 years) and Anil (5 years) went to Central School. Admissions to these schools were managed through same influential approach. Ritu, a bright five year old girl attended a public school. Both her parents were college graduates and held permanent government jobs.

Although most women were illiterate, they were keen that both their sons and daughters receive good education and take up permanent government jobs. They were proud of the fact that, some of the educated Garhwali girls were teaching in schools or employed in Banks or Government Offices. Many fathers helped the children with their homework and some of the older children took extra tuitions in the evenings. The schools in the vicinity were far from ideal as reported by the mothers themselves, but they were happy that the schools were very inexpensive and close by.

Ecological and ethnic differences in the three groups:

- A comparison

From the descriptions of the three groups, inference can be drawn in the light of the theoretical proposal of the

developmental niche of Super and Harkness (1986) capturing the important features of both psychology and anthropology. Following this model, the effect of the physical and social setting in which the child lives, the customs and rituals associated with child rearing and the psychological make up of the parents/caregiver has been taken into consideration while relating it to child rearing practices, aspirations and motivation of the parents.

The three ethnic groups differed in their ecological backgrounds, religion, physical and social setting. Basic cultural beliefs and practices, customs and rituals also varied. The occupation and the educational background of people in the three sub-cultures were different and hence there was a disparity in their economic conditions too. However, the groups shared some similarities. The qualitative aspects of the data have brought to focus the salient modes of functioning and mother/caregiver's interactions with children within the sub-cultures (which are discussed here).

The living conditions of the inhabitants in the urban squatter settlement could be termed as far from satisfactory. They were the victims of circumstances-poverty conditions and hunger which had forced them to move to the city for sheer

survival. They had accepted whatever living conditions were available to them, with their low resources. In a situation where the family had to tackle the primary issue of food and shelter, the question of optimal child rearing and education becomes a dream. The construction labourers of the squatter settlement struggled the whole day long just to feed themselves and their children.

Living in the heart of the city perhaps they may have known the availability of hospitals and schools but for their children there is no milk, not sufficient food nor basic amenities of safe and clean drinking water. Unfortunately unlike his rural counterpart, the migrant urban child often does not have the support of his extended family for his basic care. Invariably the migrant children are left to their own devices to fend for themselves at a young age. Lack of any technical skill and literacy among the parents worsens the situation. The couples spend all their time searching for opportunities for earning money rather than concerning themselves with their children's development or childcare per se.

For the migrant labourers child care was neither an ordeal nor a priority. The child's future in their view was not something which could be planned or controlled. Parents were

caught in the vicious circle of illiteracy and poverty. They showed no aspirations for children's education, nor did they have any long term plans for them.

Following is an excerpt from the narrative records of the investigator's direct observations of Shanti's family in the squatter settlement. Daily, Shanti and her husband left for work early morning after cooking food for the entire family. The food was just plain 'Chapatis' to be eaten with salt or green chillies. A few Chaptis would be left in the 'Jhuggi' for the three children aged seven, four and two years. Before leaving for work, she would breastfeed her little daughter Ramkali and then leave her in the care of her two sons till she came back in the evening. Two of her elder daughters had been left behind in the village with her husband's parents, to help in the household chores. In the city, it becomes an additional problem for the parents to look after their grown up daughters when they are away for work.

> "Its one'clock in the afternoon on 30th December-peak of Delhi's cold weather. Ramkali is sitting in the middle of the street in the squatter settlement, nose running and ruffled hair with a reddish tinge, a torn dirty sweater on her thin body, without underwear or shoes. She seems to be in distress, crying continuously, almost sobbing for several minutes. There comes no response from anywhere. Her mother is nowhere to be seen.

> Neighbours walk past her, many are sitting around in the sun but all seem oblivious of her presence. She stops crying, picks up a small twig of a broom lying on the ground. Her nose is running but that is not bothering her. She tries to clean the dusty floor with the twig in her hand. Then she crawls (on fours) upto another child. Her four year old brother walks past her, snatches the twig from her and runs away. She cries and tries to say, "na-na-na," but the boy disappears from the scene. Her elder brother can be seen running around along with other boys of his age. Both the boys look unbathed with unclean shabby hair and bare feet and the younger one is without underwear. After a while both the brothers are seen with an old tyre, they had picked up from the street, playing around their sister who now has a plank of wood in her hand and is trying to call her brothers-" aa-aa-aa", but the brothers run away. Some women are sitting and gossipping but no one comes to the little girl's help. The investigator tries to locate her brothers and sends for them but they are nowhere to be seen. The younger one comes after a while, picks her up without saying anything. Ramkali keeps quiet for some time, then she starts crying again".

This instance repeats itself several times in case of Ramkali and many other children in the squatter settlement, where the caregiver during the day is either an elder sibling who is himself a child or where the child is left alone. The physical care including feeding of children under such circumstances is irregular, infrequent and inadequate. There is apathy in children under these living conditions where play and verbal exchange between the mother/caregiver and the child is minimal.

The Gujjars on the other hand living an isolated life in the mountains seemingly unaware and uninterested in the developments in science and technology. They seemed to be content with their nomadic way of life, their animals and their large families. To bear and rear children was a natural part of their lives. In fact, children are treated as economic assets by the Gujjars. Kammo, one of the Gujjar women, when asked about the hardships of bringing up children almost gaped at the investigator with amazement.

In her words:

"मुश्किल, बच्चे पालने में क्या मुश्किल है। वो तो अपने आप ही पल जाते हैं। आप कमाते हैं, आप खाते हैं। अल्लाह ने दिये हैं, वो ही उनको पालता है। हम कौन होतेहैं उनको पालने वाले ?

(What is the problem in rearing children? They grow up themselves. They earn themselves, they eat by themselves. God has given them and he only looks after them. Who are we to look after them?)

> "In their view it does not cost anything to bring up a child, there is free mother's milk for the first two years and then the child has a small share of whatever the adults eat. After this point, the child starts

> assisting in the serious business of the care of the younger children, collecting the fuel, supervising grazing herds and others household or occupation related chores. To such a family, the child is an added advantage. For them, economic marginality is a fact of life, and they cannot visualize a different future for their children." (Anandalakshmy, 1986).

The educational aspirations were limited to the child's ability to read their religious book "Quran". Formal education was not possible in the mountainous region where they lived. But this was not seen as a problem. For all practical purposes, the daily task of selling milk had given them sufficient experience and training in handling measures of quantity of milk and in currency which most women and children did with ease. Most children, including the preschool age children, could identify each of their cattle by name. They could also anticipate the coming of a dangerous animal, especially the elephant and sometimes a tiger from a distance by their footsteps or sounds. Gujjar children knew how to protect themselves when faced or attacked by an elephant which was a common feature, either by climbing on trees or showing the elephant a log of burning wood.

The hectic life of the Gujjars and the family's involvement in the daily chores is reflected in the following observations:

> "It's 10.30 in the morning. Bismillah, the adolescent

daughter of Tej Bibi, is washing pots for keeping milk outside in the cattleshed while her mother Tej Bibi is milking the cattle. Her younger brother Hidayat Ali (6 years) has come from the informal "Quran" teaching school set up in the vicinity by a "Maulvi" (a muslim priest). Hazra, the second daughter in her teens is making large chapatis of corn flour for all the family members. She cooks daily for the entire family including the three Gujjars employed by them to work for the animals. The eldest daughter of Tej Bibi who is married and staying temporarily with her mother, is seen changing the clothes of her two year old brother. She herself has a one year old son in her lap. The seven year old Mumtaz Ali is seen getting a big pot of water for the house from the hand pump nearby. Suddenly Tej Bibi sees camels near their buffaloes grazing at a distance. She screams and shouts for her servants and her son to chase them away. She tells the investigator that cattle are scared of camels. Her three servants and two younger sons run towards the cattle, with sticks in their hands to drive the camels away".

"Life is tougher and more hectic in case of Janno who has very young children who are not able to help her in her chores. It's 11.00 am. Janno is sitting inside her 'dera' (hut) near the hearth. She has just finished milking the cattle and kept the milk vessel ready for the milkman to collect it. All her children have gathered around her looking forward to their meals. The ages of her seven children range from eleven months to twelve years. Janno enquires from her children in a loud voice, "where's the tava ?" (metal plate for cooking bread). Her six year old daughter gets up and fetches it and gives it to her mother, who is kneading the dough. Janno tells her younger daughters (aged five and three years) to go and fetch a few twigs for the fire place. She now calls out for her twelve year old son in loud tone, "Gamma, bring milk for all the children". He does not respond. She again screams - "Give milk to all the

> children". He brings a pot of milk and pours it in large bowls for all. He calls out for his three younger sisters and gives them milk. The two year old is still waiting for her share when the mother shouts at the son again, "Why don't you give milk to the little girl"? Janno had started making large chapatis. She tells her other son (eight years) to make chutney as she did not get time to cook dal. The son does not get up so she asks her six year old daughter to go and make it. The elder brother is now helping the younger sister to hold the bowl of milk in her hand and drink".

Migrants from Garhwal exposed to the urban way of life, provided with some basic amenities like electricity, clean water, medical facilities, a house and a school. Their children, have a better start in life compared with other two groups. Both socially and economically, Garhwalis were higher in the hierarchy than the two other groups. Stability and security in work, aspirations for upward mobility, educational aspirations for children and general awareness of the environment were some of the characteristics of the group.

Early childhood for the Garhwali children differed from the other two groups in the nature and quality of care. Health care of the expectant mother is the first thing to note. Medical supervision during child birth and subsequent immunization of children are the others. Availability of medical facilities of the dispensary in the vicinity enabled the mothers to take their children to the doctor independently

in case of need.

Most mothers (60%) in the Garhwali group were illiterate but the exposure to media like radio, television, films etc. had made many of them aware of the significance of supplementary feeding for infants and the value of nutritive food for others. The need and methods of family planning were known to many of them partly through the media and partly through the doctors at the maternity centres in the vicinity. Garhwali women were better informed on these issues than the women in the squatter settlement who strongly believed that they would die if they undergo hysterectomy or their husbands would lose there virility if they go through vasectomy. As has been noted, Gujjars did not think there was any need to limit the number of children, as they were seen as God sent gifts.

Most Garhwali mothers were not employed outside the house and their household tasks were not very tiring. Therefore, very young children interacted relatively more with their mothers who could also look after the physical needs of their children well. Mother-child interactions in a Garhwali household are seen in the following excerpt:

> "It´s four in the evening. Savitri has come inside her house where she had left her children sleeping to visit

> her neighbour. She had carried her knitting along with her which she did for export houses on piece wages. As she enters, her youngest son Anil gets up from his sleep. He almost jumps as he sees his mother in the house. Her eldest son Darshan, who suffered a hearing loss looks excited. He talks to the mother with signs and symbols. The younger son Anil tells Savitri that he wants to go to the toilet. The mother removes his pants and he runs to the toilet outside the house. He calls for his mother to wash him, which she does and then washes her own hands with soap. She tells Anil,"आंटी को नमस्ते करो" (Say Nameste to Aunty). Then she tells the investigator that, Anil is very fond of watching T.V. and he copies the cricket players in the matches and tries to be like them. She asks Anil,"रोटी खाओगे, चीनी से"(Do you want to eat bread, with sugar ?). He nods his head. She gives him "roti" and tells him,"ठीक से बैठो"(Sit here, sit properly and eat). Anil sits on the floor and eats a rolled ´chapati´ with sugar.

Study of the salient ecological and cultural variables helped in understanding the psycho-social make up of the parents. The occupational hazards and economic assets or limitations were reflected in the ambitions and the hopes they had for their children´s future. The quality of life of the migrant child in the urban squatter settlement is lowered by the sub-standard living conditions and harsh physical environment. It was contrary to the 1959 U.N. Declaration of the Rights of the Child. "The child shall have the full opportunity for play and recreation which should be directed to the same purpose as education. Society and the public authorities shall endeavour to promote the enjoyment of this right". Unfortunately in the

case of urban poor, this social responsibility has been completely shirked by the authorities. (UNICEF, 1985).

The economic prosperity of the Gujjars is largely linked with the ecology and any disturbance in the ecological balance would disturb their financial stability. Unfavourable weather conditions would affect the pasturage on which their cattle are largely dependent and subsequently the production is affected. Even when ecological features are favourable, the entire household has to contribute towards economic support of the family. Only when one rises above the subsistence level, there is regular monthly income and basic needs are satisfied to a large extent, one satisfies other needs. Financial security stablises the family system where rearing of children becomes a task and a priority. This was more true of Garhwali parents than of the other two groups.

PART - II QUANTITATIVE ANALYSIS

In order to ascertain the relatioship between the nature of caregiver-child interactions and certain developmental aspects and the intergroup differences in child rearing, the following hypotheses were formulated:

i) Feeding practices and food in take are related to the physical development of the child.

ii) Play materials and activities are related to the cognitive functioning of the child.

iii) The quality of stimulation and verbal interaction between the mother/caregiver and the child is related to the child's mental functioning and learning.

iv) Emotional responsivity and expression of overt affection by the mother/caregiver are related to the social and cognitive functioning of the child.

v) There are intergroup differences in the nature of childcare and interactions between the caregiver and the child.

Hypothesis (i)

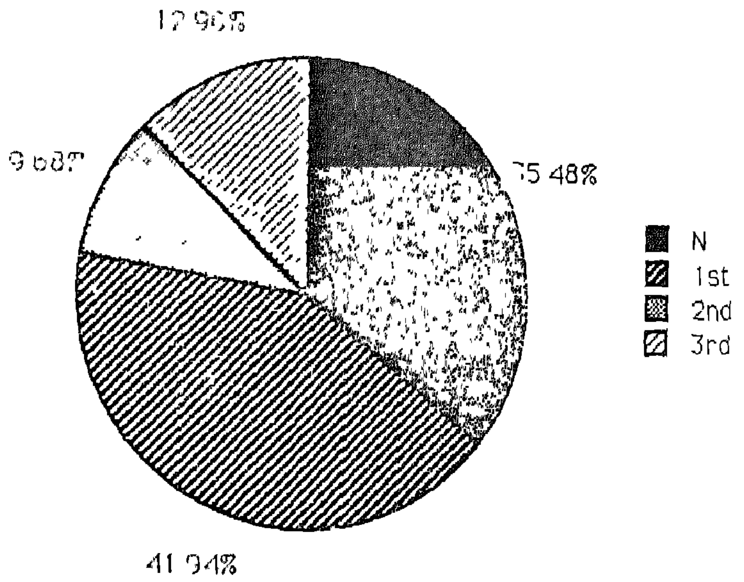
Feeding practices and food intake are related to the physical development of the child.

Nutritional status for each child was assessed by taking his weight for age. Using Gomez´ classification children were categorised according to the grades of malnutrition calculated. Feeding practices and general pattern of food intake were identified by interviewing the mother and/or caregiver along with observations during meal times whenever possible. Besides quantity and frequency other features like supervision of meals by the caregiver etc. were taken into account.

TABLE 1
NUTRITIONAL STATUS OF CHILDREN

Age Range Degree of malnutrition	1-3 years N=31		4-7 years N=57	
Normal weight	11	(35%)	32	(56%)
1st degree	13	(42%)	21	(37%)
2nd degree	3	(10%)	4	(7%)
3rd degree	4	(13%)	-	-

Age Group 1-3 years
(N=31)



Age Group 4-7 years
(N=57)

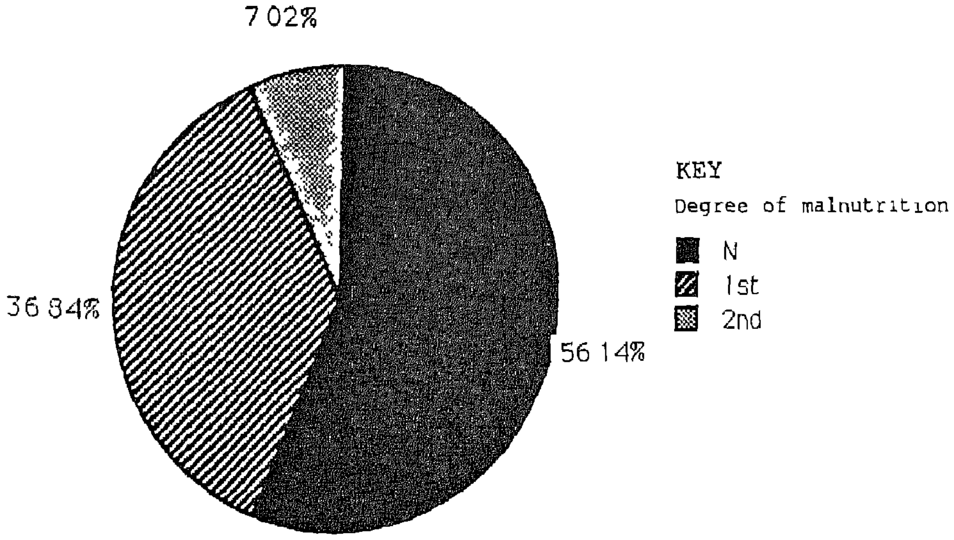


Figure 1: Nutritional status of children

Table 1 and Figure 1 indicate the prevalence of degree of malnutrition in children studied and hence their nutritional status. The figures clearly reveal that there is a higher incidence of 2nd and 3rd degree malnutrition in the younger age group as compared with 4-7 year old children. This appears probably as a result of late supplementary feeding in infancy.

TABLE 2
NUTRITIONAL STATUS AND CHILDREN'S PERFORMANCE ON ADAPTIVE DEVELOPMENT SCALES.

Age Range	1-3 years N=31		4-7 years N=57	
	Vineland Social Maturity Scale (SQ)		Stanford Binet Intelligence Scale (IQ)	
	Mean	S.D	Mean	S.D
Degree of Malnutrition				
Normal weight	112	12	85	16
1st degree	110	15	81	17
2nd degree	107	5	72	18
3rd degree	96	8	-	-

Relationship between nutritional intake and mean scores of children on the given tests for both the age groups i.e. 1-3 years old and 4-7 years old were seen separately. Figures in

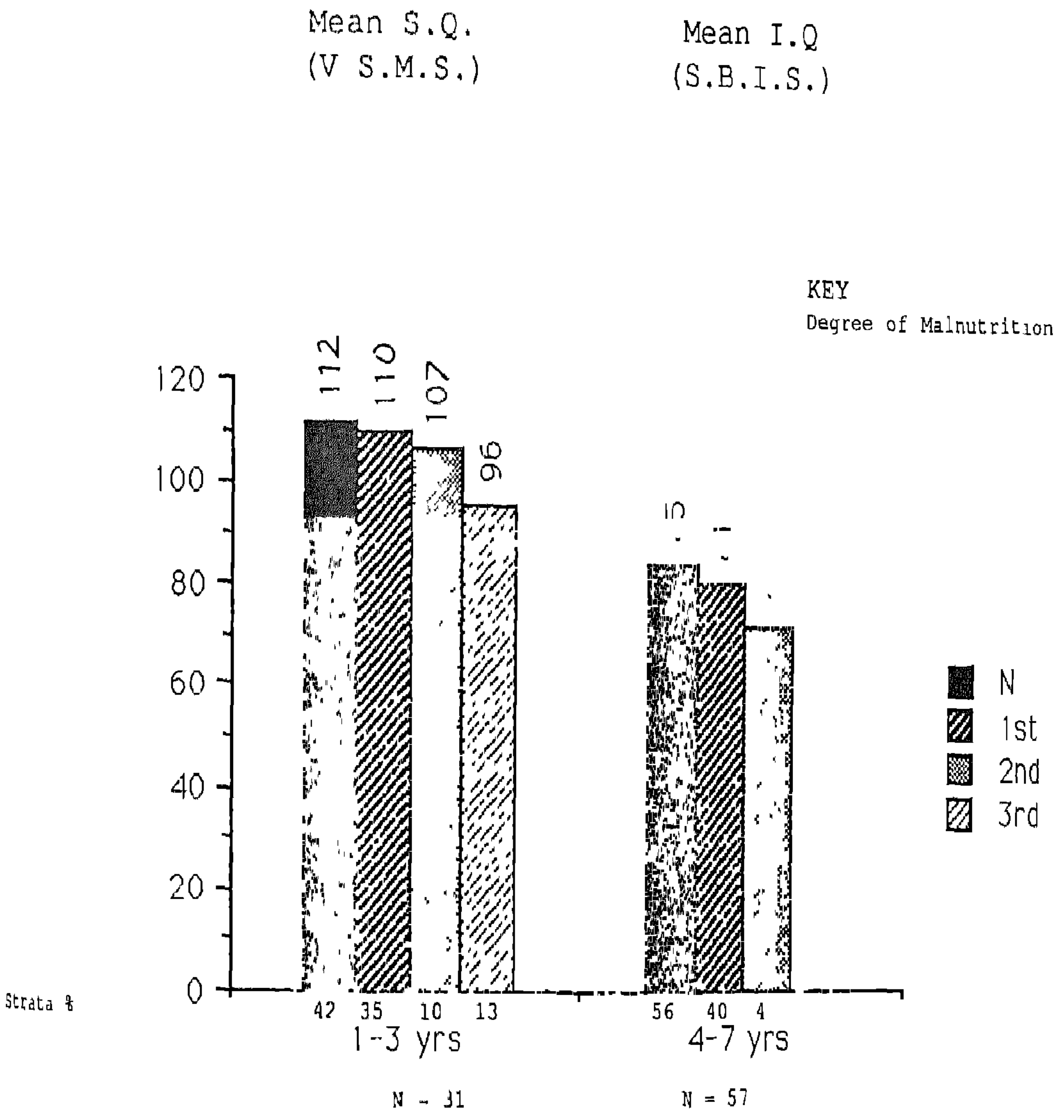


Figure 2: Nutritional status and children's performance on adaptive scales

Table 2 and Figure 2 clearly reveal that social maturity of 1-3 year old children as seen by the mean S.Q. on Vineland Social Maturity scale (Indian Adaptation) shows a progressive increase with the increased nutritional status. Although high S.D. values show a large variability in S.Q. range, the relationship is directional.

However, the data also indicate that, in the case of 4-7 years old children, the relationship between nutritional intake and mean I.Q. on the Stanford Binet Intelligence scale (Hindi Adapt.) is also positive though the I.Q. scores are low.

Hypothesis 2.

Provision of play materials and activities is related to cognitive functioning of the child.

A clear relationship between provision of play materials and activities and mean scores of children is indicated in Table 3 and figure 3. The analysis of data shows progressive increase in mean S.Q. and mean I.Q. on provision of adequate play materials and activities for children. Wide variability in scores is apparent from the high S.D. values, nonetheless, the pattern is indicative of directionality.

TABLE 3

PLAY, PLAY MATERIALS AND SOCIAL MATURITY AND COGNITIVE FUNCTIONING (ADAPTIVE DEVELOPMENT) ASSESSED BY TESTS

	Toys and Objects Available			Other Play Materials			Participation of caregiver			Caregiver initiating Play		
1 - 3 Years Mean Scores on Vineland Social Maturity Scale (Indian Adaption) S.Q.												
	L	M	H	L	M	H	L	M	H	L	M	H
N=31	18	11	2	1	27	3	7	21	3	7	22	2
Mean	106	115	124	86	109	129	98	113	116	99	122	125
S.D.	12	14	14	-	12	13	10	12	17	11	12	15
4 - 7 Years Mean Scores on Stanford Binet Intelligence Scale (Hindi Adaptation) I.Q.												
	L	M	H	L	M	H	L	M	H	L	M	H
N=57	39	16	2	1	54	2	32	25	-	29	28	-
Mean	78	92	120	54	83	98	83	84	-	79	88	-
S.D.	13	14	1	-	16	3	16	16	-	15	16	-

L = Low M= Medium H = High

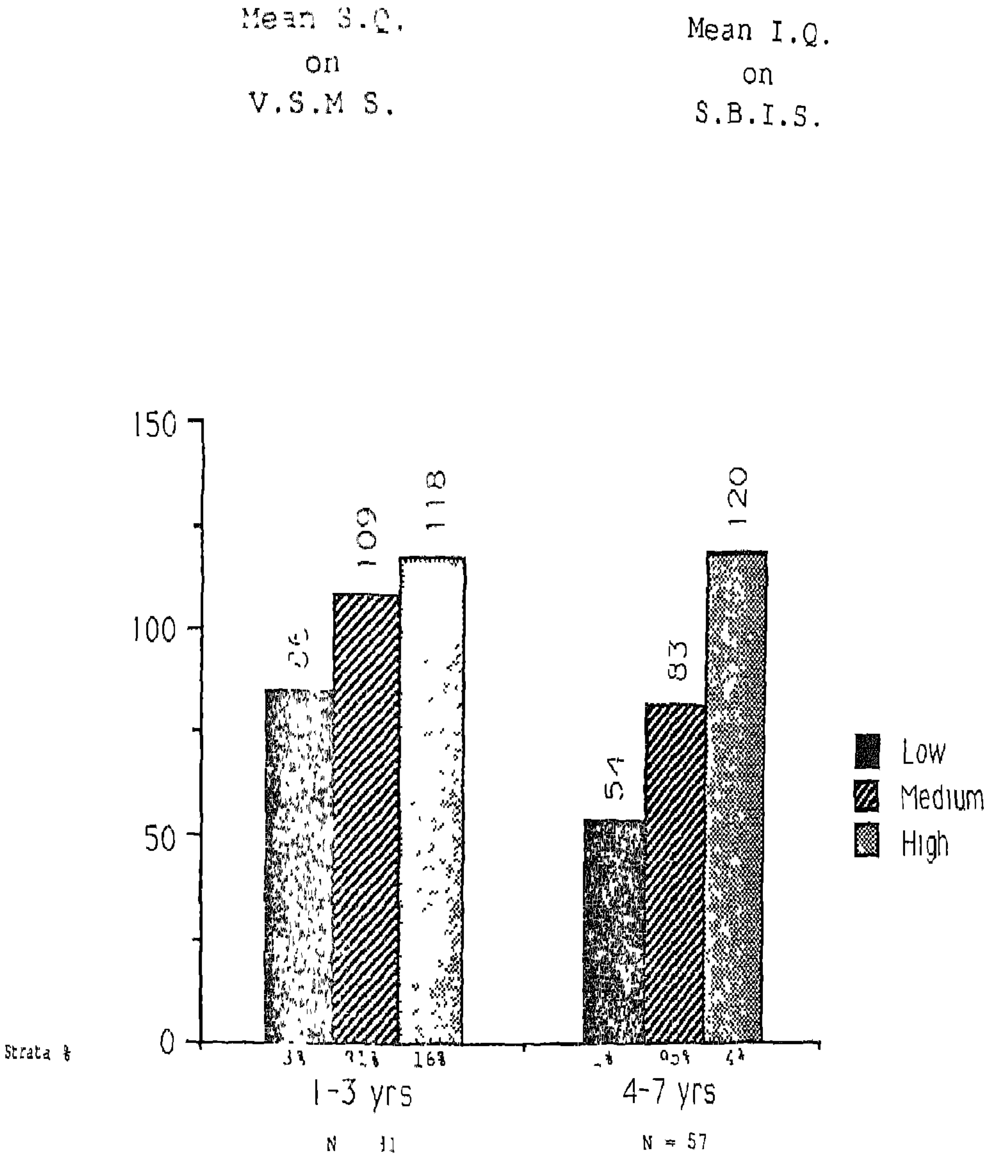


Figure 3: Play, play materials and social maturity and cognitive functioning

Hypothesis 3:

The nature of verbal interaction and stimulation of the caregivers with the child is related to the child's cognitive functioning and learning.

TABLE 4

VERBAL INTERACTION, STIMULATION AND CHILDREN'S SCORES ON TESTS

	Conversation with the Child			Labelling Objects for the child			Responding to Child's Communication			Expanding Child's Speech		
Mean S.Q. of children(1-3 years) on Vineland Social Maturity Scale (Indian adaptation)												
	L	M	H	L	M	H	L	M	H	L	M	H
N=31	9	12	6	17	8	2	1	18	12	21	12	-
Mean	99	112	114	109	117	120	86	111	111	106	118	-
S.D.	11	10	15	11	14	20	-	14	13	12	16	-
Mean I.Q. of children (4-7 years) on Stanford Binet Scale of Intelligence (Hindi Adaptation)												
	L	M	H	L	M	H	L	M	H	L	M	H
N=57	21	31	5	49	8	-	4	37	16	52	5	-
Mean	79	85	92	81	99	-	84	79	94	81	105	-
S.D.	16	13	26	13	22	-	10	14	17	15	13	-

L = Low M= Medium H = High

Verbal stimulation and interactions between the mother/caregiver and the child facilitates cognitive

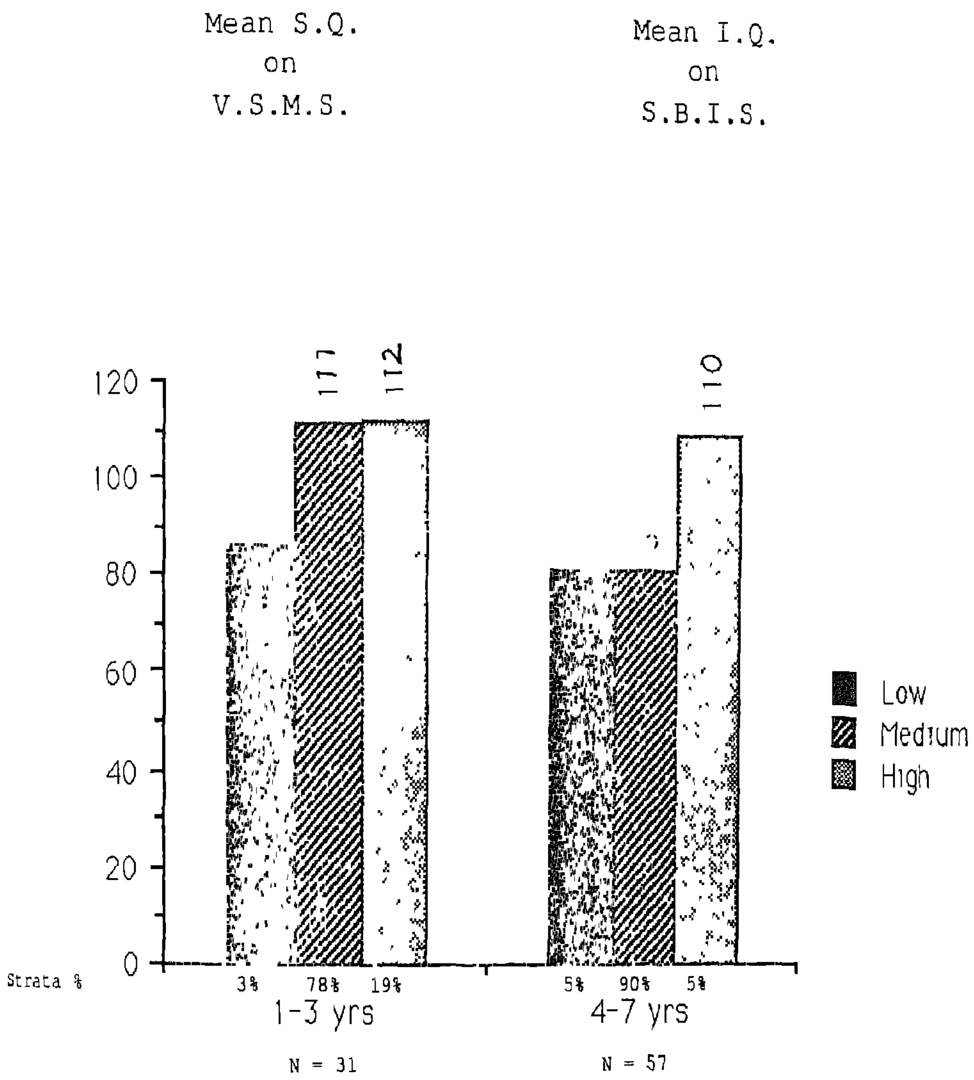


Figure 4: Verbal interaction, stimulation and children's scores on social maturity and cognitive functioning

functioning and learning which can be assessed by the scores children obtain on the given tests. The figures in Table 4 and figure 4 are indicative of this relationship. This was true both for children in the age range of 1-3 years and for 4-7 years. The positive relationship was especially significant where the mother/caregiver was active in conversation with the child and when she initiated verbal interactions and encouraged verbal behaviour.

Hypothesis 4:

Emotional responsivity and expression of overt affection by the motheer/caregiver are related to the social and cognitive functioning of the child

Indepth data collected from direct observations of the mother/caregiver and the child led to some positive data of the nature of the socio-emotional relationship of the child with the caregiver. The relationship can be seen in Table 5

From Table 5, and figure 5 it clearly appears that high degree of emotional responsivity, expression of overt affection and reinforcement of desirable behaviour through rewards by the mother/caregiver helps in attaining social and cognitive functioning as assessed by the tests on the children.

TABLE 5

EMOTIONAL RESPONSIVITY OF THE MOTHER/CAREGIVER AND CHILDREN'SCORES

	Sensitivity of Caregiver			Expression of affection			Reward for desirabale behaviour		
Mean S.Q. of children(1-3 years) on Vineland Social Maturity Scale (Indian adaptation)									
	L	M	H	L	M	H	L	M	H
N=31	3	10	18	2	9	20	9	17	5
Mean	97	102	117	93	102	115	100	112	120
S.D.	8	12	12	7	13	12	14	11	14
Mean I.Q of children (4-7 years) on Stanford Binet Scale of Intelligence (Hindi Adaptation)									
	L	M	H	L	M	H	L	M	H
N=57	11	35	11	24	26	6	26	17	-
Mean	77	84	89	79	83	101	78	80	-
S.D.	14	17	15	15	15	14	15	12	-

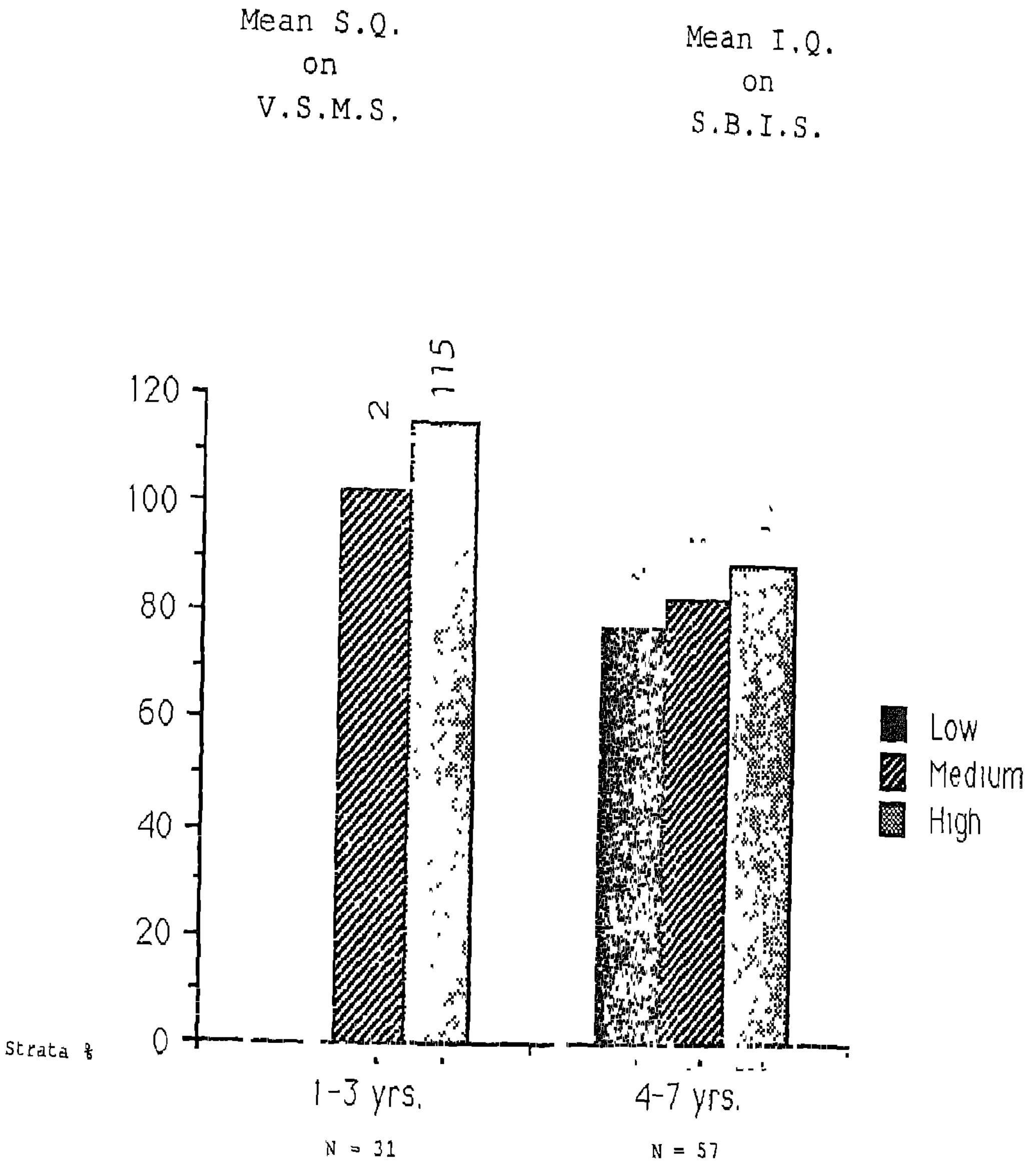


Figure 5. Emotional responsivity of the mother/caregiver and children's social maturity and cognitive functioning

Hypothesis 5:

There are intergroup differences in the nature of child care and interactions between the caregivers and the child.

Salient differences in ecological and socio-cultural background in the three groups have been described in Part A of this chapter. Following are the quantitative differences in childcare and mother/caregiver-child interactions in the three groups.

TABLE 6

GRADES OF MALNUTRITION IN CHILDREN BASED ON WEIGHT FOR AGE IN THREE GROUPS

Degree of Malnutrition	Squatter Settlement		Gujjars		Garhwalis	
Age/N	1-3 years N=8	4-7 years N=17	1-3 years N=12	4-7 years N=23	1-3 years N=11	4-7 years N=17
Normal weight	12.5%	59%	25%	57%	64%	53%
1st degree	37.5%	18%	50%	43%	36%	47%
2nd degree	-	24%	25%	-	-	-
3rd degree	50.0%	-	-	-	-	-

The qualitative analysis of the feeding practices and food intake of children in the three groups reflects variation in these practices in the three groups. It is also evident from

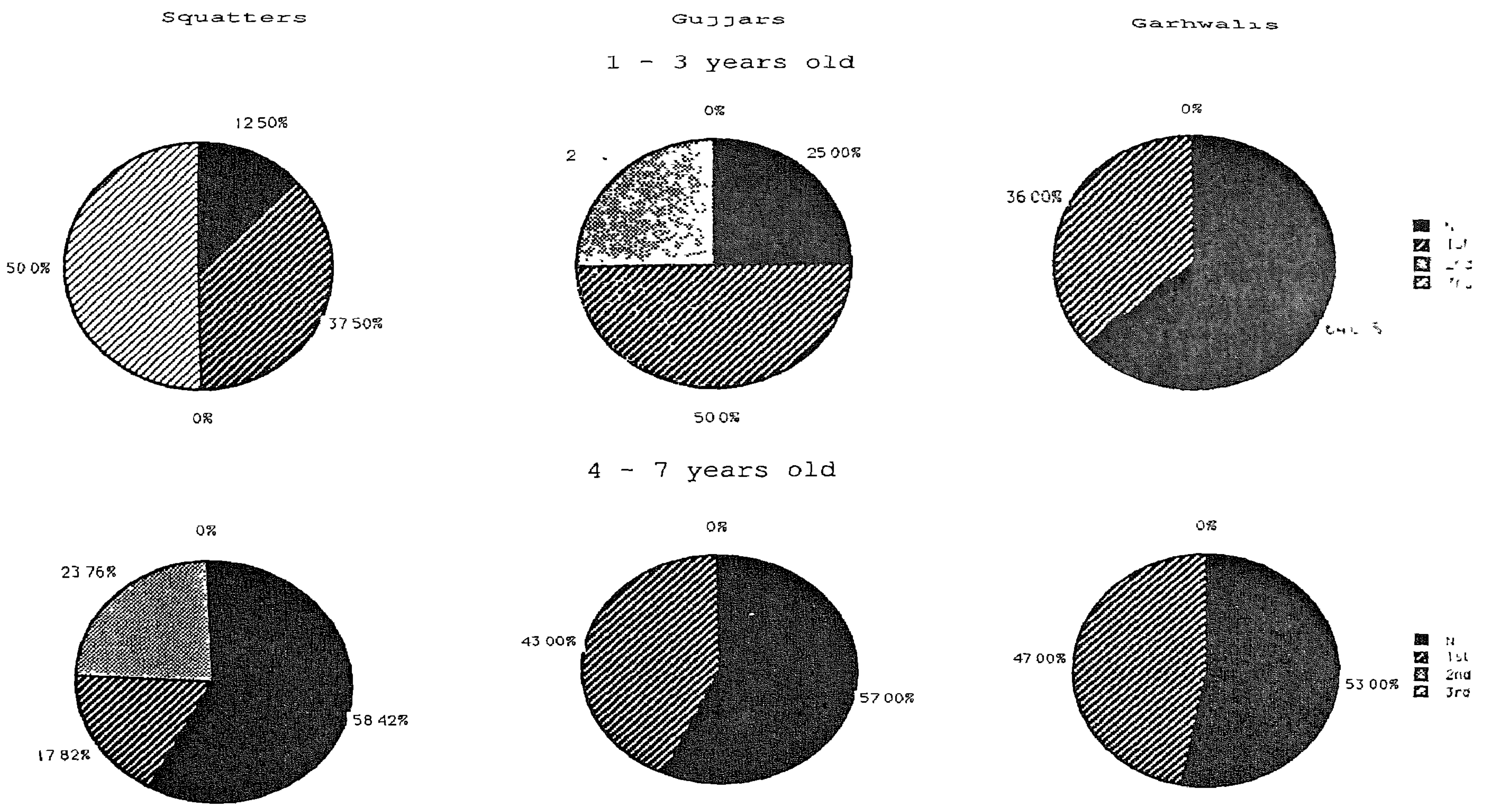


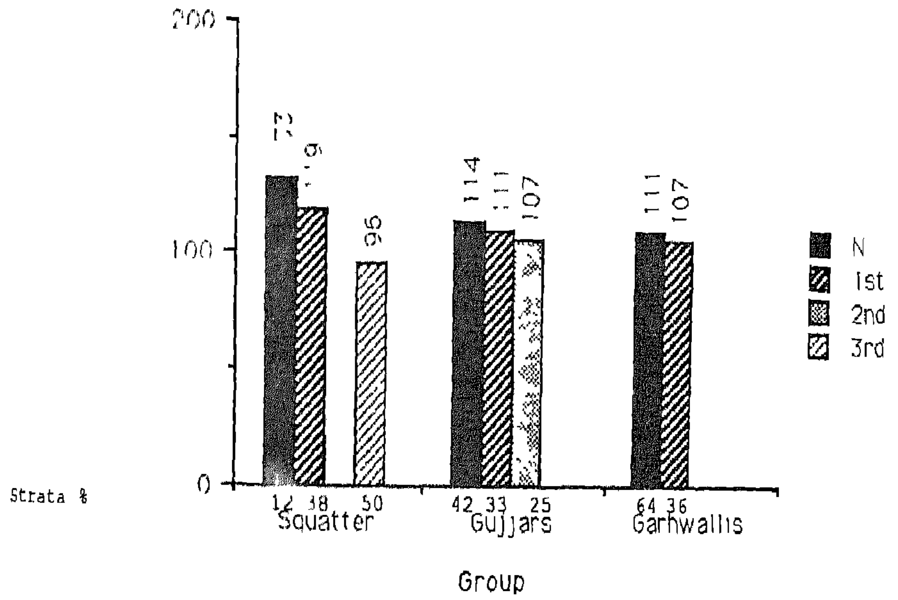
Figure 6: Grades of Malnutrition in children based on weight for age in three groups

Table 6 and figure 6. It seems apparent that children in the squatter settlement were low on nutrition with larger numbers of the 2nd and 3rd degree of malnutrition. As seen earlier in Table 1, and Figure 1 higher incidence of malnutrition was more pronounced in the younger age group i.e. 1-3 especially in the case of children from the squatter settlement and the Gujjars. In both these groups apparently supplementary feeding begins very late, as late as at 2 1/2 years of age.

Relationship between nutritional status of children and adaptive functionting (social maturity or cognitive development) was seen for each group separately. This was assessed by calculating the Social Quotient an Vineland Social Maturity Scale for 1-3 year old children and mean Intelligence Quotient on Stanford Binet Intelligence Scale for 4-7 year old children.

Table 7 and figure 7 show a positive relationship between food intake and mean S.Q. scores of 1-3 year old children in all the three groups. For 4-7 year olds, there is a positive relationship between mean I.Q. scores and nutritional status although the I.Q.'s do not vary very much.

Mean SQ on V.S.M.S. of 1-3 year old children (VSMS)
N = 31



Mean I.Q. on S.B.I.S. of 4-7 year old children

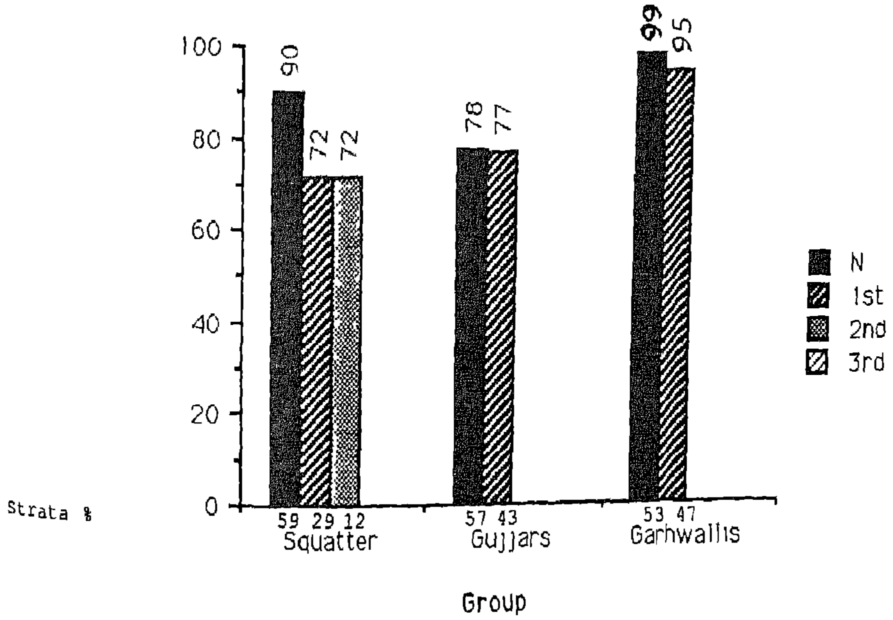


Figure 7: Nutritional status and children's adaptive scores in three groups

TABLE 7

NUTRITIONAL STATUS AND CHILDREN'S ADAPTIVE SCORES IN THE THREE GROUPS

Degree of malnutrition	Squatter Settlement	Gujjars	Garhwalis
Social maturity of 1-3 year old children Mean S.Q on V.S.M.S			
Normal weight	133	114	111
1st degree	119	111	107
2nd degree	-	107	-
3rd degree	96	-	-
Cognitive functioning of 4-7 year old children Mean I.Q on S.B.I.S.			
Normal weight	90	78	99
1st degree	72	77	95
2nd degree	72	-	-
3rd degree	-	-	-

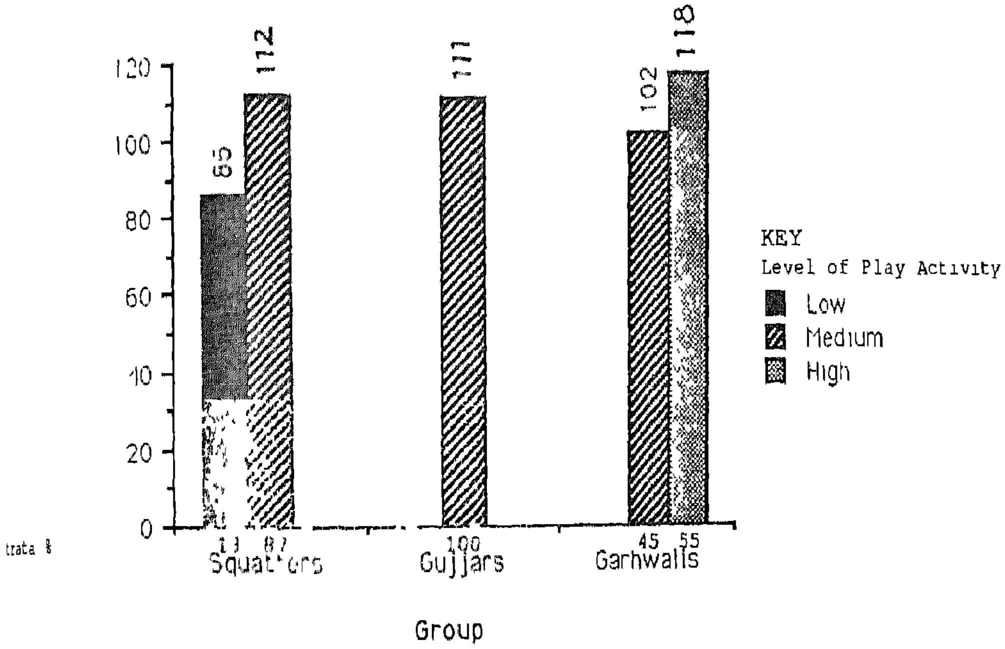
Provision of play materials and encouragement of play activities has been seen to be positively related to children's scores on the given tests (Table 8 and figure 8) in all the three groups. However children from the Squatter Settlement and the Gujjars had approximately the same level of performance on the tests, whereas it was higher among the Garhwali children. The relationship was positive for both the age groups tested.

TABLE 8
PLAY, PLAY MATERIALS AND CHILDREN'S SCORES IN 3 GROUPS

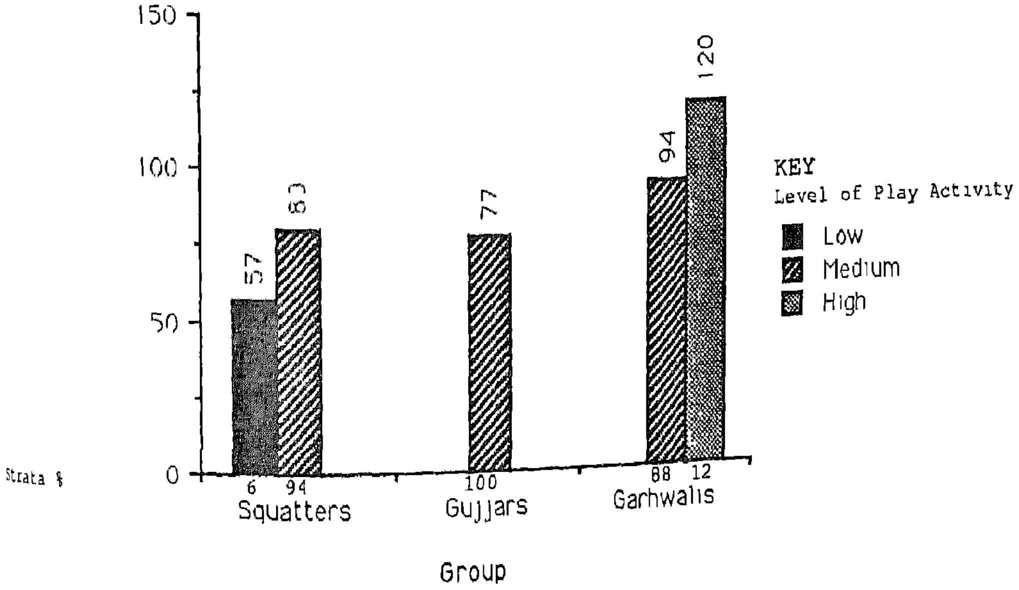
Groups	Toys & Objects Available			Other Play Materials			Caregiver Participating.			Caregiver Initiating		
Social Maturity of 1-3 year olds on V.S.M.S.												
	L	M	H	L	M	H	L	M	H	L	M	H
Squatters												
N = 8	6	2	-	1	7	1	4	4	-	2	6	1
Mean S.Q.	103	127	-	86	112	-	101	118	-	96	114	-
S.D.	14	7	-	-	14	-	9	17	-	10	15	-
Gujjars												
N = 12	10	2	-	-	12	-	-	11	1	2	10	-
Mean S.Q	110	116	-	-	111	-	-	111	108	112	111	-
S.D.	7	4	-	-	7	-	-	7	-	-	8	-
Garhwalis												
N = 11	2	7	2	-	8	3	3	6	2	3	6	2
Mean S.Q.	90	111	124	-	102	129	94	114	120	93	113	125
S.D.	10	16	14	-	13	13	10	15	20	9	15	15
Cognitive functioning of 4-7 year olds on S.B.I.S.												
	L	M	H	L	M	H	L	M	H	L	M	H
Squatters												
N = 17	13	4	-	1	14	2	12	5	-	11	16	-
Mean I.Q.	76	86	-	54	77	98	77	80	-	73	87	-
S.D.	16	18	-	-	16	3	16	18	-	15	17	-
Gujjars												
N = 23	23	-	-	-	23	-	7	16	-	10	13	-
Mean I.Q.	77	-	-	-	77	-	75	78	-	75	78	-
S.D.	10	-	-	-	10	-	12	9	-	12	7	-
Garhwalis												
N = 17	3	12	2	-	17	-	13	4	-	8	9	-
Mean I.Q.	97	94	120	-	98	-	93	111	-	92	102	-
S.D.	9	12	1	-	14	-	12	9	-	11	14	-

L = Low M = Medium H = High

Mean S.Q. of children (N 31) in age range 1-3 years (VSMS)



Mean I.Q. of children (N=57) in age range 1-3 years (SBIS)



igure 8: Play, play materials and adaptive scores of children in three groups

As seen earlier in Table 4, adequate verbal stimulation and interaction between the mother and the child is positively related to the child's performance on the given tests. Similarly, Table 9 and figure 9 also reveal a positive relationship for children 1-3 years old as well as for children 4-7 years of age. Individually seen, this relationship is especially significant where the mother/caregiver was high on conversation with the child.

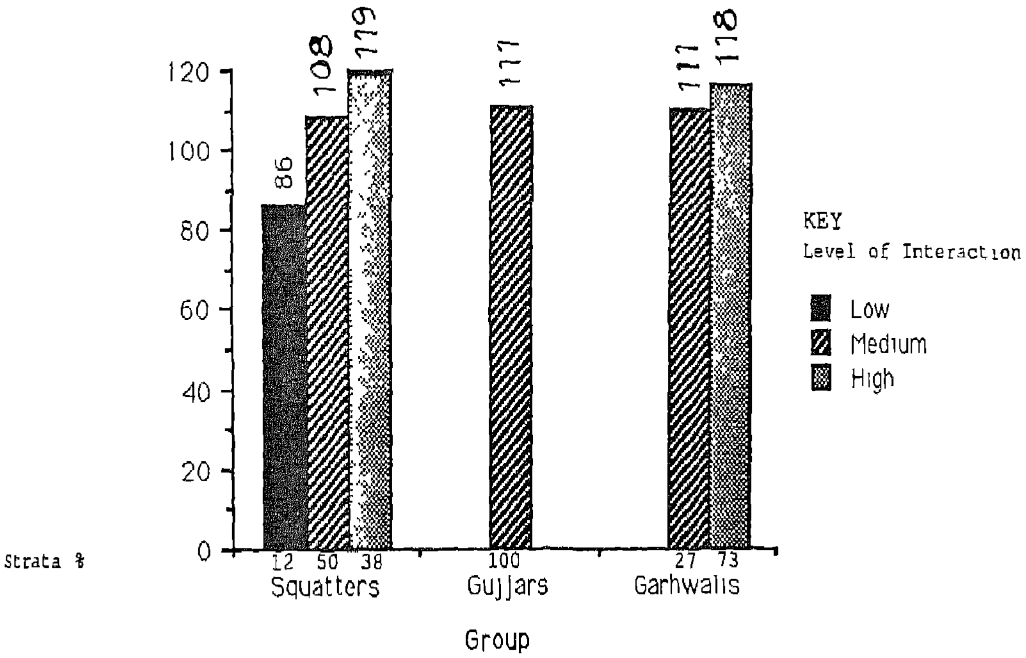
Mean I.Q. of Garhwali children was higher when compared with the other two groups. However, in terms of social maturity there was not significant difference in the mean S.Q. of the three groups. Analysis did not reveal any relationship between other dimensions of verbal stimulation and children's scores as in most cases the degree of interaction and stimulation was highly inadequate or just marginal. The high S.D. values indicate high variability in the scores nevertheless directionality and association were apparent, and intergroup differences showed consistently higher values for Garhwali children.

TABLE 9
VERBAL INTERACTIONS AND STIMULATION AND CHILDREN'S SCORES IN 3 GROUPS

Groups	Conversation with the child			Labelling objects for the child			Responding to child's communication			Expanding child's Speech		
Social Maturity of 1-3 year olds on V.S.M.S.												
	L	M	H	L	M	H	L	M	H	L	M	H
Squatters												
N=8	3	3	2	5	3	-	1	4	3	5	3	-
Mean S.Q.	93	113	126	103	119	-	86	108	119	103	119	-
S.D.	8	11	7	15	12	-	-	14	12	15	12	-
Gujjars												
N=12	3	9	-	12	-	-	-	5	7	12	-	-
Mean S.Q.	110	111	-	111	-	-	-	110	112	111	-	-
S.D.	2	8	-	7	-	-	-	11	9	7	-	-
Garhwalis												
N=11	3	4	4	4	5	2	-	7	4	4	7	-
Mean S.Q	95	108	122	96	116	120	-	109	110	96	117	-
S.D.	10	14	17	9	15	20	-	18	17	9	19	-
Cognitive functioning of 4-7 year olds on S.B.I.S												
	L	M	H	L	M	H	L	M	H	L	M	H
Squatters												
N=17	9	7	1	17	-	-	4	13	-	17	-	-
Mean I.Q.	70	85	99	78	-	-	84	76	-	78	-	-
S.D.	15	15	-	17	-	-	10	18	-	17	-	-
Gujjars												
N=23	5	18	-	23	-	-	-	15	8	23	-	-
Mean I.Q.	73	78	-	77	-	-	-	75	81	77	-	-
S.D.	9	10	-	10	-	-	-	9	10	10	-	-
Garhwalis												
N=17	7	8	2	10	7	-	-	9	8	12	5	-
Mean I.Q.	93	96	120	91	107	-	-	90	106	94	105	-
S.d.	12	11	1	10	12	-	-	10	12	12	13	-

L = Low M = Medium H = High

Mean S.Q. of children (N=31) in age range 1-3 years (VSMS)



Mean I.Q. of children (N=57) in age range 4-7 years (SBIS)

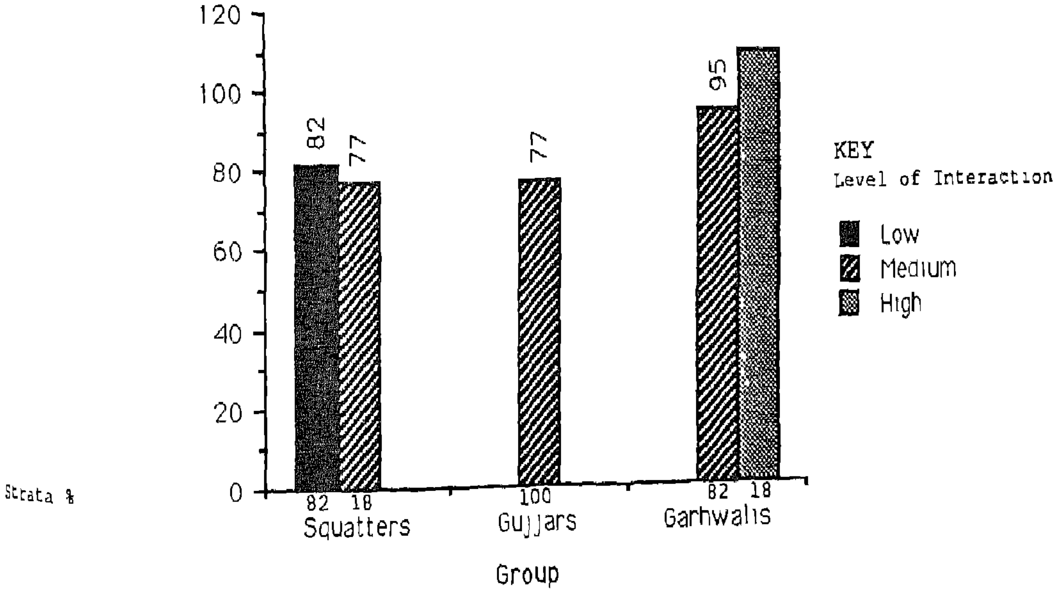


Figure 9: Verbal interaction, stimulation and children's performance on tests in three groups

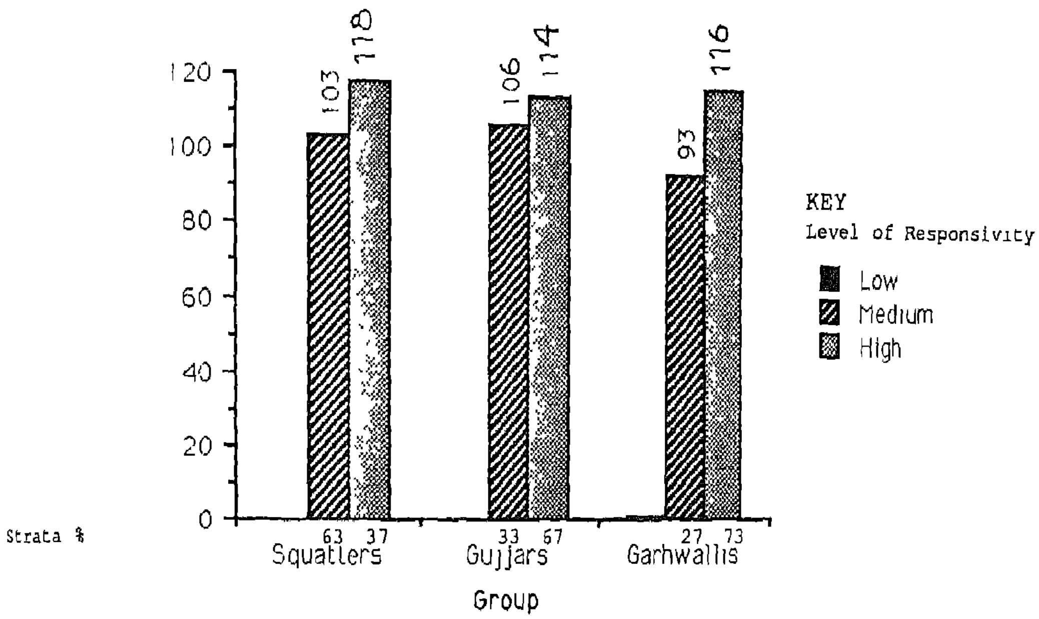
TABLE 10

EMOTIONAL RESPONSIVITY OF THE MOTHER/CAREGIVER AND CHILDREN'S SCORES IN THE THREE GROUPS

Groups	Sensitivity of Mother/ Caregiver			Expression of overt affection			Reward for desirabale behaviour		
Mean scores of 1-3 year olds on V.S.M.S									
	L	M	H	L	M	H	L	M	H
Squatters									
N = 8	2	3	3	1	4	3	4	2	2
Mean S.Q.	96	108	119	86	108	119	102	105	127
S.D.	10	16	12	-	14	12	17	3	7
Gujjars									
N = 12	3	9	-	-	3	9	3	9	-
Mean S.Q.	104	113	-	-	104	113	104	113	-
S.D.	6	6	-	-	6	6	6	6	-
Garhwalis									
N = 11	1	4	6	1	2	8	2	6	3
Mean S.Q.	100	96	120	100	90	116	90	113	116
S.D.	-	9	16	-	10	17	10	17	16
Mean scores of 4-7 year olds on S.B.I.S									
	L	M	H	L	M	H	L	M	H
Squatters									
N = 17	9	7	1	11	6	-	12	5	-
Mean I.Q.	75	80	95	75	84	-	75	86	
S.D.	14	20	-	16	16	-	17	12	-
Gujjars									
N = 23	-	17	6	9	13	1	11	12	
Mean I.Q.	-	77	77	77	77	80	76	78	-
S.D.	-	10	8	9	10	-	8	11	-
Garhwalis									
N = 17	2	11	4	5	7	5	4	13	-
Mean I.Q.	89	96	105	93	95	105	94	98	-
S.D.	2	15	6	8	16	11	9	15	-

L = Low M = Medium H = High

Mean S.Q. of children in age range 1-3 years (V.S.M.S.)



Mean I.Q. of children (N=57) in age range 4-7 years (SBIS)

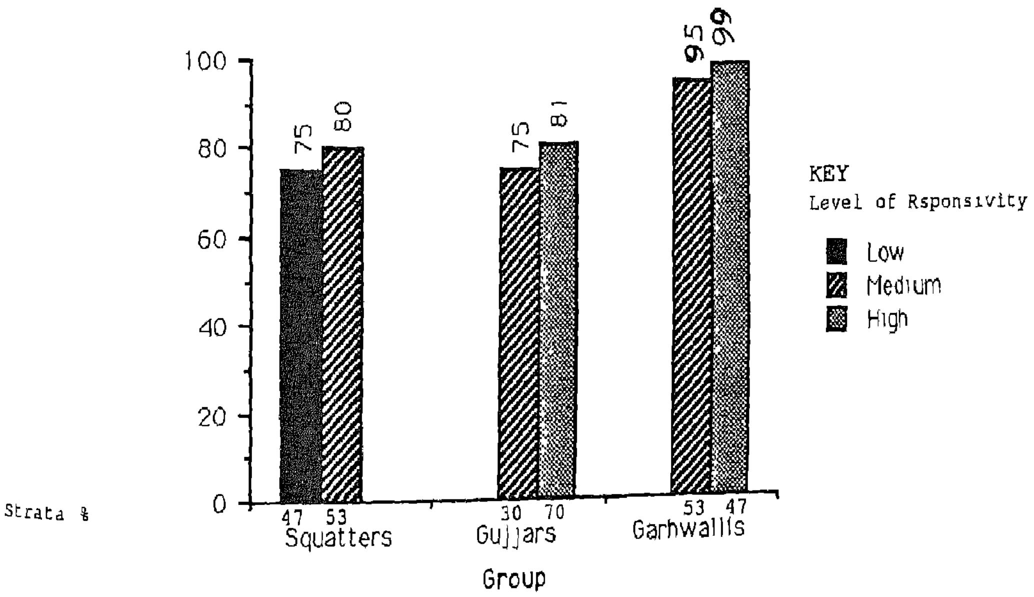


Figure 10: Emotional responsivity of the mother/caregiver and childrens scores on tests of social maturity and cognitive functioning in three groups

Similar to the earlier analysis (Table 5) the figures in Table 10 also clearly indicate that an adequate socio-emotional relationship between the mother/caregiver and the child is positively related to the child's social maturity. This positive relationship was true for all the three groups. For the older age group i.e. 4-7 years old the relationship was less pronounced in all the three groups.

The relationship between the dimensions of child care under study with the developmental status of the child has been seen in earlier tables. In order to see the difference among the three ethnic groups with respect to the relative frequency of occurrence of a given characteristic, the Chi Square statistical test was used. Since the data was in frequencies (nominal) and sampling was purposive random, the most appropriate test of significance for making comparison was a non parametric one. Further, Contingency Coefficient (C) was calculated to assess the degree of association between the type of ethnic group and the dimensions of child care. The following tables reveal the significance of the frequency of occurrence of child care practices in the three groups.

TABLE 11

INTERGROUP DIFFERENCES IN RELATIVE FREQUENCY OF MOTHER/CAREGIVER CHILD INTERACTIONS

	Dimensions of child care and interaction	x^2	C
I	**Play & play materials**	18.66*	.42
	a) Toys and objects available	35.25*	.54
	b) Other play materials	8.23*	.36
	c) Participation of caregiver	14.19*	.37
	d) Initiating play activity	1.96	.14
II	**Emotional responsivity of caregiver**	7.63*	.28
	a) Sensitivity of the caregiver	22.25*	.45
	b) Overt expression of affection	8.25	.29
	c) Reward for desirable behaviour	8.20*	.29
III	**Verbal stimulation & interaction**	14.90*	.38
	a) Conversation with the child	9.34	.30
	b) Labelling objects	38.73*	.55
	c) Responding to child's communication	8.74*	.30
	d) Expanding inadequate speech	18.46*	.41

p = .05 1 df = 3.84, 2 df = 5.99, 4 df = 9.48.

Table 11 clearly indicates that the relative frequencies of child care practices differ significantly for families of the urban squatter settlement, Gujjars and the Garhwalis. The C values also show a strong association between the child care practices and the ethnic group.

TABLE 12
COMPARISION OF
GROUP I (URBAN SQUATTER SETTLEMENT) AND GROUP II (GUJJARS) IN DIMENSIONS OF MOTHER/CAREGIVER-CHILD INTERACTIONS

	Dimensions of child care and interactions	x^2	C
I	**Play & play materials**	2.91	.22
	a) Toys and objects available	2.83	.21
	b) Other play materials	1.44	.15
	c) Participation of caregiver	11.95*	.41
	d) Initiating play activity	1.89	.17
II	**Emotional responsivity of caregiver**	3.41	.23
	a) Sensitivity of the caregiver	19.13*	.49
	b) Overt expression of affection	3.82	.24
	c) Reward for desirable behaviour	2.33	.19
III	**Verbal stimulation & interaction**		
	a) Conversation with the child	6.17*	.30
	b) Labelling objects	data insignificant	
	c) Responding to child´s communication	49.30*	.67
	d) Expanding inadequate speech	data insignificant	

p = .05, 1 df = 3.84, 2 df = 5.99

Table 12 shows the comparison between the urban squatter settlement and the Gujjars where it clearly reveals that major difference in the two groups is apparent in the area of food intake and in verbal stimulation and interaction between the caregiver and the child.

TABLE 13
COMPARISION OF
GROUP II (GUJJARS) AND GROUP III (GARHWALIS)
IN DIMENSIONS OF MOTHER/CAREGIVER-CHILD INTERACTIONS

	Dimensions of child care and interactions	x^2	C
I	**Play & play materials**	8.30*	.34
	a) Toys and objects available	31.82*	.58
	b) Other play materials	6.19*	.30
	c) Participation of caregiver	9.25*	.36
	d) Initiating play activity	.15	.04
II	**Emotional responsivity of caregiver**	1.27	.14
	a) Sensitivity of the caregiver	0.11	.04
	b) Overt expression of affection	1.49	.15
	c) Reward for desirable behaviour	2.47	.19
III	**Verbal stimulation & interaction**	9.97*	.36
	a) Conversation with the child	6.09	.30
	b) Labelling objects	16.47*	.45
	c) Responding to child's communication	.98	.17
	d) Expanding inadequate speech	21.96*	.50

p = .05, 1 df = 3.84, 2 df = 5.99

When Gujjars are compared with Garhwalis the difference is seen mainly in the provision of play materials and activities and in the verbal interactions and stimulation given to the child. (Table 13).

TABLE 14

COMPARISION OF

GROUP I (URBAN SQUATTER SETTLEMENT) AND GROUP III (GARHWALIS) IN DIMENSIONS OF MOTHER/CAREGIVER-CHILD INTERACTIONS

	Dimensions of child care and interactions	x^2	C
I	**Play & play materials**	6.04*	.31
	a) Toys and objects available	15.78*	.47
	b) Other play materials	2.43	.20
	c) Participation of caregiver	.24	.06
	d) Initiating play activity	.89	.12
II	**Emotional responsivity of caregiver**	12.58*	.43
	a) Sensitivity of the caregiver	5.06*	.29
	b) Overt expression of affection	7.82*	.36
	c) Reward for desirable behaviour	9.74*	.39
III	**Verbal stimulation & interaction**	60.00*	.72
	a) Conversation with the child	20.42*	.52
	b) Labelling objects	18.25*	.48
	c) Responding to child's communication	22.22*	.54
	d) Expanding inadequate speech	33.85*	.62

p = .05, 1 df = 3.84, 2 df = 5.99

The urban squatter differs significantly in relative frequency of child care practices when compared with the Garhwalis in all areas of child care. The high values of the Contingency Coefficient further show a strong association between child care practices and the concerned ethnic group.

Discussion:

The quantitative analysis of the data was done primarily to see the relationship between various aspects of child care, mother/caregiver-child interactions and development in children in the age range of one to seven years. A total of eighty eight children in this age group were studied from three ethnic groups. The statistical analysis of the data draws our attention to many salient findings which support the hypotheses tested in this study. The findings have helped to identify some of the variables in organisational structure and content of home environment that can affect children's physical, socio-emotional and cognitive development in significant ways. The effect of home environment was studied in the light of Parke's (1978) model highlighting home environmental factors where he included both social and physical variables. The major findings related to these environmental factors are discussed here.

The results indicated that adequate nutritional care and good feeding practices help the child to grow normally as indicated by his body weight for age. Inadequate, unsupervised and infrequent meals were to a large extent responsible for low body weight. Ignorance about the correct practices or the nutritional needs of young children was a cause for low weight

in many cases. In all the three societies, breast feeding of infants continued as long as the mother's milk was not exhausted either in the natural course or consequent to another pregnancy. Colostrum was discarded in all the three groups. This practice has been revealed earlier by several anthropological studies of many societies in the world. It reflects the lack of awareness of the significance of colostrum-the yellow fluid.

Timing of the introduction of supplementary feeding varied in the three cultures. Delay in supplementary feeding seemed to be responsible for the second or third degree malnutrition amongst the children in the age range of one to three years. The analysis clearly revealeld that the number of children in second or third degree malnutrition had been considerably reduced in the older group of four to seven years old among the squatter settlement, whereas it was nil amongst Gujjars and Garhwalis. This pattern emerged probably because the babies started well on breast milk in all the groups but after six months when the mother's milk alone was not sufficient for the baby and supplementary feeding did not begin, the weight of the infant gradually declined. In the urban squatter settlement ignorance about or inability to give supplementary feeding to the infant prevailed and this was true amongst the

Gujjars as well. However, among Gujjars, infants were introduced to buffalo's milk by the end of the first year or earlier along with the breast feed but not on specially prepared semi-solid food. Garhwali mothers weaned their infants from breast to bottle milk and also started off with some soft foods like bananas, biscuits or rice by the end of the first year. But even here the systematic routine of giving specially prepared food for infants at regular intervals was missing. The awarenss of the importance of supplementary feeding in early infancy was created by exposure to radio and television programmes. A Gujjar infant consumed sufficient milk which took care of some of the nutrients needed for growth. The worst hit was the daily wage labourer's child who was only breastfed for more than two years on inadequate supply of mother's milk. Providing any other milk was out of question for lack of purchasing power of the parents. When the mother stopped feeding, the child was put on adult food which is unsuitable and is hard to digest thus causing diarrhoea and indigestion . This would lead to their gradual decline in body weight. Bulky food may fill the child's stomach but the energy requirement may not be met. NNMB surveys (1964-1980) indicated similar observations: in urban slums the situation was bad where 25% of households met neither calorie not protein requirements, another 29% meeting protein requirements

but not calories, resulting in over 54% of households being inadequate in calorie consumption. Economic hardships and illiteracy can lead to several other handicaps to which one may attribute the slow physical development and low body weight. Low body weight is the result of economic, cultural and physiological handicaps which is effectively brought out by Cravioto et al (1967) in their diagrammatical model. Although weight for age can be taken as a good single indicator of the nutritional status or physical development of the child, malnutrition is not always the result of lack of food in the house.

Adaptive development including social maturity and cognitive functioning in children was seen in relation to the rating on mother/caregiver child interactions. Nutritional status of 1-3 year old children was found to be positively related to their Social Quotient (S.Q.) measured on V.S.M.S. whereas for 4-7 year old children the relationship between nutritional status and mean I.Q. on Stanford Binet Intelligence Scale was positive although the I.Q. scores were low. This indicates that good nutritional care during infancy plays a significant role in development of social maturity and the attainment of developmental milestones. In case of older children factors other than food intake, like a stimulating environment and

learning situations contribute to the performance on intelligence tests. It appears that sensori-motor development in infancy is to a large extent governed by biological factors or neuro-muscular maturation for which nutritional care is essential, whereas in later years the formation of cognitive structures and the child's mental functioning may be attributed more to his environmental stimulation and opportunities for activity.

As hypothesised, a positive relationship between the provision of play materials and activities to the child and the child's measured social maturity and intelligence was found. It appears that adequate toys and play materials enable the child to learn for himself the cause and effect relationships by exploring objects and the environment. He learns the properties of the physical world, object constancy and the principles of conservation as explained in Piaget's theory of cognitive development. The process of adaptation is enhanced not by the availability of toys and objects alone but when mother/caregiver actively mediates and initiates play activity in the child.

Verbal interchange between the mother/caregiver and the child showed a positive relationship with the measured intelligence

of children above the age of three years. This relationship was especially significant when mothers were active in conversation with the child and when they initiated and encouraged verbal behaviour. The other dimensions to be analysed included labelling objects for building the child's vocabulary and expanding his speech for better expression and flexibility. However, this relationship could not be explored because the mothers/caregivers in the present study were low on both these aspects.

The positive relationship between maternal verbal stimulation and children's language development has been well documented (Clarke Stewart 1973; Bradley and Caldwell, 1976). In a recent infant study it was found that mothers rated high on cognitive stimulation had infants with higher mental development index or MDI (Anandalakshmy, 1982). Supportive evidence to the relationship obtained in the study also comes from earlier studies where mother infant interaction and infants' competence become concurrently associated after 18-24 months of age (Bayley, 1965; Golden and Birns, 1968). Interestingly, it also indicated highly significant I.Q. differences at age three in the same children who showed no significant differences when tested at 18 and 24 month. The explanation of such findings is that the major cognitive abilities may

acquired by the child from his experiences during the period of language acquisition or the learning and stimulation during infancy may be manifesting itself only later as it is not measurable on infant intelligence scales.

The satisfaction of socio-emotional needs of children, expression of overt affection by way of hugging, kissing patting etc. provides the emotional security to the young child. Emotional security has been found to build up autonomy and a sense of initiative in the child which in turn would encourage the child to explore his environment. This was supported by the positive relationship found between the socio-emotional relation of the mother/caregiver and the child. For children below three years of age, the relationship was especially prominent. Emotional and social responsivity of the mother/caregiver in infancy may be predictive of infant's cognitive development and language competence in later years. This has been demonstrated by many studies (wach, Uzgiris and Hunt 1971; Clarke Stewart 1973; Bradley and Caldwell 1975). since language tasks are an integral part of the traditional intelligence tests, a linguistically competent child can be expected to perform better on these tests as compared with a child who is low on verbal competence.

Comparison of the three group on each dimension of child care brought out some salient inter-group differences in the mother/caregiver child interactions. Social maturity of infants in all the three groups was found to be positively related to their nutritional status whereas prominent relationship was not found between the older children's (4-7 years old) nutritional status and their I.Q.,

Play materials and activities, verbal interactions and stimulation provided by the mother/caregiver was found to be positively related to the child's scores in all the three groups. However, there was not any significant difference found in the mean I.Q. and range of performance scores of children from the urban squatter settlement and in Gujjar children from the mountainous regions of Hardwar. A higher mean Intelligence Quotient among the Garhwali children could be clearly seen. There was, however, no significant difference in the mean Social Quotient for the three groups.

The higher I.Q. range of the older Garhwali children (4-7 years) in comparison with the Gujjars and those in urban squatter settlement perhaps could be attributed to the schooling of the Garhwali children. Besides the relative economic security and stability in life and exposure to media,

one essential advantage they had was that of school attendance. All children above four years, except one girl, were attending school. On culturally biased tests, differences can be expected to occur in performance of those children who are not part of the culture of the test and invariably school tasks are very similar to most of the test items. Unless the child is familiar with the majority culture or these school learning tasks he is not able to perform as proficiently as other school going children. Supportive evidence to this comes from earlier research in favour of school going children. Regular attendance in the nursery school brings about a positive change in the intellectual, social and language development of children, no matter whether they received stimulation at home or not (Muralidharan and Banerji, 1970). When comparison between school going and non-school going children was made, it was found that school attendance influenced the acquisition of concepts positively (Malani, 1975). In another study of pre-school children of Delhi, it was revealed that, school going children from any kind of preschool institution achieved higher scores on cognitive functioning irrespective of the social class (NIPCCD, Country Report).

This does not imply that, non-school going children are not

endowed with potential intelligence. It may not have been exploited by formal learning and teaching situations. Most school learning tasks match both the verbal and performance items of the standardized intelligence tests and hence the school going children are at an advantage as far as measured intelligence is concerned. However, if the testing of intelligence would depend upon the learning and awareness of the ecological and cultural environment and on the tasks the child is expected to perform in his ecological and family setting the observation would be different. A five-year-old Gujjar child may tell you the names of each of the cattle owned by his father and will be able to distinguish one from the other easily. He would also be aware which of the buffalo is expecting a young one and when. A Gujjar commented when the child was being tested, "बहिन जी इससे नहीं पूछो कि चश्मा क्या होता है, इससे पूछो कितनी भैंसों के बच्चा होने वाला है । एक-एक के नाम बता देगा। ये तो जंगली बच्चे हैं । ये बस पत्थर,झरने और जानवरों के बारे में जानते हैं । ये सवाल तो आप शहर के स्कूली बच्चों से पूछो"।

(Sister don´t ask him what are spectacles, ask him how many buffaloes are pregnant, he will name them all. These are children of the forest, the know only about stones, springs and animals. You should ask the school going children of the towns these questions.)

The man was not wrong in what he said. These Gujjar children know and learn their traditional means of livelihood by

helping and contributing to the economic gain in the family. Unfortunately, the child in the urban squatter settlement is the worst hit-neither does he attend school, nor learns farming or construction work. His potential intelligence does not find expression in any productive or constructive task till he grows into an unskilled adult again to repeat the vicious circle of illiteracy, unemployment and poverty.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Adult-child interactions observed in the present research have paved the way to the understanding of the process of human development in the social and cultural context. Study of the three different ethnic groups brought to light several crucial ecological and cultural practices adopted by the parents. An insight into the psychological make up, assets, and limitations of the members of the family especially the parents, could be gauged as the observations were made in the naturalistic setting of the sample.

The study has led to some salient findings with specific reference to mother/caregiver-child interactions in ecological setting. Feeding practices and nutritional intake, favourable socio-emotional relationships and a stimulating environment (both human and physical) play significant role in normal development. It has also suggested that the nature of child care during the early years is vital for development of the young child and the process of development is governed both by the biological universals and by the network of external factors.

A total of eighty eight children in the age range of one to seven years from three diverse ethnic groups were studied. Data were collected using naturalistic observations and interviews. Assessment of children was done for growth, social and cognitive development. Statistical analysis of the data revealed that feeding practices and nutritional intake particularly the frequency of eating and the amount of food consumed by the child were important for his normal growth assessed by the weight (for age) of the child. It indicated that inadequate feeding practices were to an extent responsible for slow growth and that malnutrition was not always the result of lack of food in the house. Ignorance and lack of awareness of mothers especially about supplementary feeding in infants often cause malnutrition.

Social maturity of the infants was seen to be positively related to their nutritional status. The items on the Vineland Social Maturity Scale (V.S.M.S.) include sensori-motor, social and verbal skills. Maturation of neuromuscular system is favoured by normal physical growth and hence, higher Social Quotient (S.Q.) was obtained by children with normal body weight. High scores were obtained by 1-3 year old children on social maturity where the opportunities for play activities were adequate and where the caregiver displayed emotional

responsivity, affection and close contact with the child. However, verbal stimulation and interchange between the caregiver and the infant did not show a clear relationship with the S.Q. scores of 1-3 year old children. There is a strong possibility of these results showing up later in childhood as shown by some of the earlier researches (Bradley and Caldwell, 1976).

Reviewing the analysis for the 4-7 year old children, it is revealed that adequate feeding practices and nutritional intake has a relationship with normal growth (weight for age). Play activities and interaction during play have a relationship with the Intelligence Quotient (I.Q.) scored by children in this age group. Similarly, verbal stimulation and interchange were clearly related to adaptive (cognitive) development as revealed by the I.Q. scores.

Reviewing the results of the present research in the light of the earlier theoretical constructs on early childhood, it appears that there is an important relationship between the two. Each theory has an important explanation and does find an empirical evidence for it but there are always situational variations. The present research has shown that early interactions are vital for setting the foundation for all

aspects of development.

Freud's theory of psycho-sexual development laid emphasis on satisfaction of socio-emotional needs, expression of overt affection and positive reinforcement for desirable behaviour in early childhood. That these factors promote normal Socio-emotional development was revealed clearly for 1-3 year old children in the study. In many cases where the mother was not always the caregiver and she was not there to respond promptly to the child's needs, the child still showed high scores on social maturity. This was so because of the attention and care given by other members in the family. This finding is supportive of Kagan's (1979) belief that in most of the cultures in the world, child rearing is shared by siblings and others in the family and the child grows up with normal socio-emotional development. Kakar's (1981) description of the Indian mother and her infant having an exclusive symbiotic relationship is true for many Indians but if the family is living in the shadow of poverty, this relationship may not be sustained. The child may be brought up by many persons and multiple caretakers do not hamper normal development. However, problems will arise in cases where neither the mother nor the mother substitute is available to the child. This was true in some cases of construction labourers where the mother

had no option but to leave the children on their own when she went to work or stay back with them with no resources to feed them.

Comparison of the ethnic groups studied has highlighted the specific environmental differences in the three groups. Conditions of economic insecurity and the pressure of environmental instability, maternal employment outside the home with no substitute care are some of the factors responsible for low level of interaction between the mother and the child and this situation may perhaps make the mother insensitive to the young child's needs. When both the parents are struggling for survival, the child's needs tend to become secondary. This was true of the construction labourers, the migrants in the urban squatter settlement whose way of life left no other option. Lack of awareness of principles of child growth worsened the situation.

The Gujjars living in isolation, away from the modern world were apparently without any educational aspirations for children. Children were the economic assets for them so they were socialised for their traditional means of livelihood at a very young age. On the other hand Garhwalis showed the upward mobility and high hopes and educational aspirations for

their children for which they had the basic means and facilities. Their traditional means of livelihood i.e. farming did not provide them a living wage and they were being pulled by the life in the cities. Economic stability and security, and availability of basic amenities helped in the normal growth and development in children. In addition, Garhwali children had the opportunity to attend school. It was observed that this can ensure learning, self discipline and constructive use and channelization of their energies. Although in the present study the Garhwali children were not attending ideally operated schools as reported by their mothers, when compared with children in the squatter settlement and Gujjars, they showed greater awareness of objects and events in their environment. Exposure to media had acquainted them with the current world too. Their performance on the Intelligence tests was consistently better than that of the children in the other two groups. This does not mean that non-school going children are not endowed with potential intelligence. Its just that it has not been exploited and their mental faculties have not been trained to perform such test items which match the school tasks. Observations revealed that Gujjars children displayed a great deal of practical intelligence regarding cattle rearing. Even a six year old child could differentiate one animal from

another and know several of them by name. Young children could protect themselves from the wild animals in the forest. Further, living in the substandard conditions of the squatter settlement also requires the emergence of coping mechanisms requiring sharper intellect than is required to stay where things are relatively easily available.

The process of development of the mental faculties in children based on biological maturation is more or less similar in all normal children. The test items do have a cultural content. The differences between children are frequently in functional intelligence, which comes from learning specific tasks and having the motivation to perform on the tests. The differences in I.Q. points do not necessarily imply the intellectual deficiency of the non-school going children, but the lack of experience in *performing* the required tasks and the degree of motivation to perform well on such tasks. In order to assess the intellectual development of children Piaget used the clinical method i.e. a non-psychometric approach of measuring child's adaptive or cognitive development as against the psychometric approach of measuring the child's intelligence using standardized tests. He also identified qualitative changes in mental functioning as the child grows in age and experiences, rather than using a

quantitative approach to mental functioning. Many of the observations in the natural setting of children revealed that simple experiences, opportunities and environmental learning leads to the construction of cognitive schemas required to cope effectively or adapt to the environment. A five year old child in the forest could identify the family's buffaloes and know each of them by name and sense the presence of an elephant in the vicinity cleanly tasks reflecting intelligence.

Sufficient empirical evidence supporting the existence of any substantial long term continuities are not available. Experts in the field have begun to stress the importance of resilience in human development. It is still a debatable point which has far from conclusive results. Nonetheless, there is general consensus among developmental psychologists that interactions and care during early childhood are important in their own right. This period in the developmental span of the child needs to be valued both for itself and for what it does in later years. It is a phase when the foundation is laid for physical, socio-emotional and intellectual development. The thrust now is to understand and identify the experiential and the environmental factors in both the human and physical environment which are important for optimal development of the

child.

Implications and recommendations

The findings of the study have many implicit suggestions to the experts planning child welfare programmes and working towards the optimal development in children. It is true that human beings have a resilient personality and that early deprivation may not have permanent long term effects always. But the importance of early childhood years has also been empirically established and it suggests that nature of child care, opportunities and environmental stimulation enabled the timely onset of physical and cognitive milestones. If during early childhood years certain kinds of experiences can bring about optimal physical and mental development and set desirable behaviour and competence in children, these can help the child to meet the demands of life in adulthood with greater success. Deprivation of optimal childcare and mother/caregiver´s interaction with the child on the other hand may slow down neuromuscular maturation thus creating a developmental lag.

Large scale intervention programmes can be fairly successful in eradicating ignorance and spreading health education and

awareness amongst parents regarding the needs of young children. A vast majority of Indian children grow-up in such ecological settings where both the natural environment and the human environment are not conducive to optimal development. Deprivation and poverty have been handicaps for the spread of education. It also suggests that lack of material resources or economic poverty are not the only factors responsible for malnutrition and underdevelopment in children - it is the cumulative effect of a multitude of interrelated factors. Any policy for the economic development of the country undoubtedly should focus on its growing children. Optimal development of children should be considered as important human investment for long-term policy and planning.

One of the ways to make any intervention programme effective is to enlighten the parents with the knowledge about the nutritional needs and psycho-social needs of children. Lack of knowledge in most subcultures about importance of colostrum and the timely introduction of supplementary feeding for instance, may be more responsible for malnutrition and childhood diseases in children than just economic deprivation. Similarly, lack of verbal exchange between the mother/ caregiver and the child or deprivation of close proximity with the caregiver may slow down the process of cognitive-language

development or socio-emotional development in the young child. Intervention programmes should also focus on those child care practices which facilitate the the child's mental and cognitive development.

To conclude, it can be said that growing up is a complex interaction between genetics or the potential abilities, specific environmental factors and the opportunities the child gets during the developmental span. These and many other factors form a network of forces impinging upon the developmental process. This study tried to identify the factors in the environment affecting the development. The overview of the findings suggest that the influences relate in a multiple sense and affect the whole system of functioning in a collective manner. This complexity in poverty groups makes a vicious circle. Breaking of this vicious circle is where one has to intervene and take policy decisions.

The study of various other subcultures in the Indian context with specific focus on cultural child rearing practices and mother-child interactions is recommended. The present study may prove useful in the formulation of concepts for subsequent cross-cultural investigations.

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ANNEXURE I
GROUP DATA SHEET

Group No.1

A. Location of the group

B. Types of houses   1. Kuchha   2. Pucca   3. Jhuggi

C. Availability of basic amenities   Adequate   Marginal   Inadequate

1. Access to drinking water:
2. Water for bathing & washing
3. Toilet facilities
4. Lights/fans

D. Ecological variables

1. Fresh air/trees
2. Open space inside the house
3. Space to play around the house

E. Educational facilities

1. Availability of school within a distance of   1 Km   3 Km   More than 3 Km

F. Availability of medical care

1. Access to a doctor within
2. Availability of hospital services
3. Emergency medical care   Available/Not available

ANNEXURE II
FAMILY DATA SHEET

Serial No.

Name of the Mother

Name of the father

A. Education	Illiterate	Primary	Middle	High School
1. Mother				
2. Father				

B. Occupation	Permanent Service	Irregular Daily Wages	Own Business	Works in the House for Money	No Employment
1. Mother					
2. Father					

C. State & District of Origin

First Language
Other Languages

D. Reasons for migrating, if migrant

1. Non-availability of work in native village
2. Insufficient land in native village
3. No land in native village
4. Higher wages in Delhi
5. Any other

E. Whether they are sending (taking) money home

1. Monthly
2. Seasonal (Diwali/Holi)
3. Occasional
4. Not at all

F. Children in the family

1. ALIVE

S. No.	Names	Age	Sex	In the village	With the parents	Attending school
i)						
ii)						
iii)						

2. DEAD

S. No.	Age	Sex	Infection	Accident	Disease	Not Known
i)						
ii)						
iii)						

G. Relationship of other person if any, living in the family

Paternal relative
Maternal relative
Any other

H. Total income of the family p.m.

Approx. (Rs.) 300-600 600-900 900-1200 1200 & above

I. Type of family 1. Nuclear 2. Extended 3. Joint

ANNEXURE III

CHILD DATA SHEET:

Name

Age

Sex

I. Nutritional intake - General qualitative assessment of the the feeding practice and food intake

II. Play and play materials

1. Objects and toys available
    1. Low
    2. Medium
    3. High

2. Play materials other than toys
    1. Low
    2. Medium
    3. High

3. Participation of mother/caregiver during play time
    1. Low
    2. Medium
    3. High

4. Mother/caregiver initiating a play activity
    1. Low
    2. Medium
    3. High

III. Emotional responsivity and affective expression of the mother/caregiver:

1. Degree of sensitivity of the mother/caregiver to the child's physical and emotional needs
    1. Low
    2. Medium
    3. High

2. Frequency of expression of affection (physical closeness, caressing, kissing, hugging, talking affectionately) by the mother/caregiver
    1. Low
    2. Medium
    3. High

3. Mother/caregiver rewarding the child for desirable behaviour (praising, smiling or giving material rewards)
    1. Low
    2. Medium
    3. High

IV. Mother/caregiver's responsivity, interaction and stimulation

1. Mother/caregiver talking to the child
    1. Low
    2. Medium
    3. High

2. Mother/caregiver labelling objects for the child
    1. Low
    2. Medium
    3. High

3. Responding to the child's communication and vocalizations
    1. Low
    2. Medium
    3. High

4. Mother/caregiver spontaneously teaching the child to speak words or expand his inadequate speech

   1. Low
   2. Medium
   3. High

V. a. Anthropometric measurements

Weight =

b. Social Quotient on Vineland Social Maturity Scale (Indian Adaptation)

or

Intelligence Quotient on Stanford Binet Intelligence Scale (Hindi Adaptation)